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Original Articles

HEADACHE AND EYESTRAIN.*

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That a vast majority of all cases of headache, certainly nine-tenths, are due to eyestrain is a truth beyond question. That with headache, and often without it, a large indefinite proportion of digestional, nervous and psychic disease is due to the same cause is quite as true. A few cases may be due to malfunction or organic disease of other organs, but it is not known in how many of these cases eyestrain is the primary cause of these extraocular diseases; it is also unknown in how many the eyestrain may be the direct and contributing cause of the headache ascribed to the extraocular disease.

PROFESSIONAL NARCOTISM.

In 31 years the members of the American Ophthalmological Society have contributed three papers suggesting that eyestrain is the cause of some headache, and one member has contended that nasal disease, not eyestrain, is the cause of frontal headache. But there have been 122 papers on ocular tumors and many hundreds on ophthalmic surgical subjects. Medical opinion in continental Europe has never head of eyestrain as a cause of anything, much less of extraocular disease, and in England professional pandiculation is confined to a very few "extremists," the mass still dreamlessly sleeping as sweetly as their continental brethren. In our country the testimony as to the rôle of eyestrain in producing headache is positively overwhelming, but the great body of our medical men are still begging for "just a little more sleep, a little slumber, a little folding of the hands to sleep." As to the ocular origin of much neurasthenia, gastric disease, general ill-health, suicide, etc., we have only got as far as nightmare. What are the results of this professional narcotism?

1. The country practitioners, and some of the silent, modest, general physicians of the cities, are awake to the possible ocular origin of these headaches, etc., but the so-called leaders, the writers of text-books, the members of the professorial class, all these, except one or two, are wholly indifferent to the matter. The text-book of Allbutt is described as the best on general medicine in the world. It contains not a word on the subject of the ocular origin of headache, or the ocular origin of any other disease, not even the psychic disease of text-book makers.

2. The general medical profession of America is a hundred times more conscious and acknowledging in the matter than the oculists. It is, of course, beneath the dignity of most neurologists to care about the cause or the cure of any disease. While the governor of Massachusetts, in his inaugural address, says that untold numbers of children are becoming ruined in health because of headache, eyestrain, etc., leading members of great ophthalmic societies ridicule such folly. While one great diagnostician says that all sorts of gastric diseases, as is "familiar to all," are often due to eyestrain and cured by glasses, all the stomach specialists in the world and 99/100 of the oculists of the world deny the truth. While a great New York surgeon says he refers a large proportion of his patients threatened with abdominal operation to the oculist, who cures them brilliantly, the entire ophthalmic profession smiles inaudibly at this supposed "extremism." While the best orthopedic surgeon in Philadelphia publicly states that a large proportion of cases of lateral curvature of the spine are due to eyestrain and ocular function, ophthalmologists are silent or sorrowfully groan and squirm. While medical journals are teeming with reports of the world's greatest scientist as to the sleeping sickness in Africa, the appalling sleeping sickness at home does not at all interest. While from 40 to 60 per cent. of school children, by actual examination, are suffering from headache and other systemic effects of eyestrain, and while great school teachers are trying to get the oculists to stop it, famous ophthalmic specialists are pretending to refract without a mydriatic and with the ophthalmoscope or the ophthalmometer alone, and, of course, the spectacles they prescribe are ludicrous blunders; consequently their pet amusement is to guy the "eyestrain faddist." The professor of medicine in a great university school writes me that, excepting one, he can not make the oculists of his neighborhood believe in the eyestrain origin of diseases demonstrably due to eyestrain.

What is the reason for such a topsy-turvey world? Why are we caught in such a set of contraindications and absurdities?

The answers are many, but there is only one that can be emphasized here, and it is absolutely decisive. As general practitioners you desire to cure your patients. Most of you are not professors, mixed up with, and your personalities enslaved by college rivalries, hospital cliques and personal ambitions. You don't care a button for conservatives or extremists, but you desire, first of all, the truth, the knowledge of the causes and the cure of diseases.

NEED OF REFRACTION EXPERTS.

The single explanation of all this wrangling and misunderstanding is that refraction is not a science; your refraction work is not well done. If the experiment could be rightly carried out, of ten or of fifty different prescriptions for the eyestrain of one and the same patient, by as many different oculists of different cities, even in America, no two would probably agree. The test of the eyestrain theory has never been made; no attempt at it has been made. There is no uniformity of teach-

* Read in the Section on Practice of Medicine of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

ing as to the science and art of refraction. If our car axles, dynamos, watches, engine valves and thousands of instruments of precision were made with the lack of precision customary in the diagnosis of refraction errors by the oculists of the world, our civilization would come to smash in 24 hours. If the truth of the eyestrain theorist is to be tested, there is only one pair of lenses which can cure a certain patient. There is not a serious and adequate school of refraction in the world, not an attempt to establish such a school. Until you establish such a school most of your attempts to cure your patients of headache, neurasthenia, disordered nutrition, functional gastric, intestinal and abdominal diseases, many nervous and mental diseases, etc., will generally end in failure.

Wilson[1] of Montrose, Pa., thus puts his finger on this ailing place:

> It is a fact that nearly all the headaches just above and back of the eyes are caused by defective vision, and that large numbers of school children go to their physicians and are given headache remedies without end. This is to no purpose, and they finally have to give up school on account of becoming nervous wrecks, unless by chance they happen into some jewelry store and are given some kind of lenses to wear, which may relieve the trouble to some extent. The country physician should take up refraction work, because the great mass of working people simply can not pay the fee demanded by the oculists and are forced to put up with the indifferent work of the so-called opticians. Two or three hundred dollars will buy the necessary equipment, and a month's work in some eye infirmary will give one a start, and one can do as well at once as any optician will ever be able to do.

As a profession and as specialists we have not raised one finger to prevent or to undo the deep disgrace hinted in these lines. There is not a single adequate, serious school of refraction in the world, nor is there a sign that one is coming. Yet such a school is more needed than all the ophthalmic departments in all the medical colleges and hospitals of the world. If there are a few careful and skilful refractionists in the United States who might agree in their diagnosis of one case, there are 5,000 who would disagree, disagree, root and branch. There are whole states and territories, whole sections, in which no poor person can possibly get such medical service.

Moreover, there are at the least 15,000,000 American children and adults afflicted with lateral curvature of the spine. All the smiles of incredulity will not, alas, lessen the number, nor the horror of the consequences of the abnormalism. There is no existing machinery, no care or solicitude to prevent the headache and other sufferings, none to prevent the very existence of these millions of scoliotics. The defect arises unknown and unsuspected by physicians and by orthopedists; when it is incurable the orthopedist learns of a few of the cases. Surely over 90 per cent. of these scoliotics owe their tragedies to ocular function and malfunction, readily demonstrable, and its result always preventable. Two months ago, for example, a child of five years of age was brought to me with many complaints, vomiting of food, peevishness, ill-health generally; a nurse and a physician were retained as constant attendants of the child. I found a grade of astigmatism so low that great authorities in this society publicly to the profession and daily to their patients, state that it is useless to correct. Both axes of the astigmatism were at 105 degrees, a defect that produces head tilting and spinal curvature. The child had both. Glasses were applied, and since then the head tilting and the incipient spinal curve have disappeared. There is no vomiting. No drugs are now required. There is steady gain of weight and complete return to normal health. What would have been the life history of this little one had it fallen into the hands of the "ophthalmic surgeon" who scorns the refractionist; who sneers at functional and beginning disease; who does his refraction with the ophthalmoscope, and without a mydriatic; who loves surgery 50 or 500 times as much as he does the prevention of disease; who loves surgery 5,000,000 times as much as he loves the prevention of surgery; who is 40 or 100 times more interested in a sarcoma or an osteoma, or a coloboma, than in the headache and vomiting, and "neurasthenias," and suicides of his patients?

Physiologic pathology, not the outworn and senile anatomic variety; functional, not organic disease, clinical, not laboratory and ultrascientific medicine; individualistic treatment, not that by averages and rules; prevention as well as the cure of disease; such are to be the watchwords of the future.

OCULISTS AND FAKERS.

At present we oculists are most busy and earnest, and effectively so in creating and commissioning "fake" ophthalmic and refraction schools, refracting opticians, peripatetic spectacle peddlers, and quack M. D. oculists. These things are the direct result of our neglect. No blame of course to them who make their chief corner stone the block we have rejected. There are eighty or ninety good reasons why headaches may not be relieved by our prism glasses. At present osteopathy is influencing legislatures, and ignorantly, but far more successfully than many of the profession, it is treating the millions of distorted or weakened and diseased backs and bodies of our people; we neglect the study of the spinal column utterly and wholly in the functional and beginning stages of lateral curvature. Osteopathy is a product of our professional neglect and bigotry, and especially of the ophthalmic variety.

Great surgeons and orthopedists say, if a child does come into their hands with lateral curvature, "O, let it go; give it some exercises; it will get well as it grows older." But spontaneous cure never comes. If they pretend to treat it at all, they give it over to a nurse to handle. In truth they do not treat it until they can treat it surgically; and there was never a case of organic lateral curvature cured, either surgically, or by all the horrible torture chamber machines a Hoffa could devise or picture. Not a man knows the cause of this defect, and how, therefore, can there be a cure? The superintendent of schools of New York City orders his hundreds of thousands to carry their books on one side one-half the time, and on the other side the other half. In this same city great classes of poor children are formed in lines and taught to bend their bodies at command to one side, and then to the other. Better would it be to hold a black cat over the crossroads at midnight and mumble a charm. Osteopathy is a wretched thing, but it often cures and, however, blindly and stupidly it is making some sort of use of deep massage, the stone which the medical architects refused.

Eddyism is rampant in the land and professionally we are largely responsible for Mrs. Eddy, her foolish children, and her million dollar temples. As medical men we have wholly neglected the attitude of mind of the patient to himself, and to his disease. Especially to her disease! We have been so absorbed in our so-called

1. THE JOURNAL A. M. A., May 19, 1906.

"science," our professional dignity, our personal reputation and success, that we have forgotten the first duty of any human being: the duty to be kind, and to take a personal interest in each other as individuals, especially if they are our patients. The second duty, also too frequently we have forgotten: to be sincere, to believe in ourselves and our therapeutics. With all the follies of faith cure and of unchristian unscience, the Eddyistic sillies did not forget those two fundamental duties.

Again the quacks have made use of our refused quarryings as corner stones of their healing temples. It is ridiculous bigotry to make fun of the quacks we ourselves allow or create. These quackeries are not made up entirely of errors, follies, greeds, and stupidities. And our medical practices, "scientific" and "ethical" as we fondly imagine them to be, are not without elements and alloys of quackery, folly, and greed.

The more conservative, the more "scientific," the more self-satisfied, the greater, usually, is the alloy of error and quackery. Especially in the cities; especially among the leaders, the professors, the text-book makers; especially among the specialists. The hope of progressive and helpful medicine lies in the general and country practitioners, the modest unknowns of the cities, the protestants and extremists. Anything, even earthquakes, are needed to shatter the complacency of the success hunters and of the success getters.

Every text-book, and almost every monograph, and medical journal article will be revolutionized when your oculists agree; your oculists will not agree until you as general practitioners secure the establishment of at least one serious refraction school, with a two-year, or a three-year obligatory course of postgraduate study. And this, as general physicians, is your concern. You will be compelled at last to force us to do our long-neglected duty.

HEADACHES DUE TO AURAL DISEASE.*

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Headache to-day, as in the time of Hippocrates, is one of the most common symptoms presenting itself to the practitioner. The modern classification varies somewhat from that laid down by the father of medicine, but, notwithstanding the progress of the ages, many cases continue to be intractable. There are few symptoms whose control affords more relief to the suffering patient.

Among the organs of special sense whose derangement may cause the utmost discomfort to the patient the nasal accessory sinuses and the eye have been prominently mentioned. I add to this list a consideration of certain diseased conditions of the ear, some of them capable of causing not only the most violent headache, but even death.

The ear is generally looked on merely as a means of communication with the outside world, and its intimate relation with the more vital structures of the head is, in consequence, likely to be overlooked. Then, too, the ear, although exceedingly sensitive in responding to sound impulses, does not betray a slight falling off in function as does the eye. A loss of vision of 50 per cent. could scarcely pass unnoticed, and yet half the hearing power may be lost without the patient being aware of it. Because of this fact it is natural that the attention should have been called first to ocular defects as a cause of headache.

Intimate Connection Between the Innervation of the Ear and the Central Nervous System.—This was early established by Zuckerkandl and later observations have offered further clinical proof of this relationship. In some instances the mere presence of cerumen in the canal has caused most intense headache. Cephalalgia is fairly commonly caused by aural disease. It is seldom overlooked in the acute form, because directly referred to the ear. In more chronic cases, as we shall see later, the diagnosis may be more difficult.

Obstruction of the Eustachian Tubes.—Gradle[1] has observed that children, especially, are likely to have an almost continuous headache from slight obstruction of the Eustachian tubes. With this condition the hearing may not necessarily be greatly impaired, and unless one ear be much worse than the other the underlying cause may escape observation. This condition has been termed by Legal[2] cephalalgia pharyngo tympanica. The headache is of a dull, heavy character, and the patient is incapable of sustained work.

Careful inspection of the drum membrane should establish the diagnosis, and complete relief almost immediately follows the simple procedure of inflating the middle ear. This relief is usually temporary, and steps should be taken to remove any adenoids, or other cause of obstruction of the Eustachian tubes.

In the more chronic adhesive processes in the tympanic cavity the subjective symptoms are not always so definitely referred to the ear. Absolute pain is seldom observed with this condition. When found it is generally a referred neuralgia, and its cause must be sought elsewhere. A feeling of fulness in the head, or pressure in the brain, may, however, be associated with the chronic dry catarrh of the ear.

Except in the more advanced stages, the defect in hearing may pass undetected, as the patient may continue to hear the spoken voice to the maximum distance long after distinct pathologic changes have taken place in the ear.

Inflammation of the Middle Ear.—Headache is occasionally caused by acute inflammation of the middle ear, and under these conditions is usually relieved by paracentesis. Politzer believes that some of the most obstinate headaches are caused by a hyperemia transmitted to the scalp. Severe pain in the head accompanying aural disease, not confined to the region of the ear, persisting in spite of treatment, is regarded by Syme[3] as indicating the impending onset of intracranial infection.

For many years we have recognized this to be true of the existence of meningitis, or possibly of brain abscess, and we are now learning that it may be significant of the presence of a sinus thrombosis due to the ear.[4]

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* Read in the Section on Practice of Medicine of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

1. Gradle: THE JOURNAL A. M. A., 1888, vol. xi, p. 339.
2. Legal: Deutsch. Arch. f. klin. Med., 1888, vol. xl.
3. Syme: "Indications for Operation in Chronic Purulent Otitis Media," Brit. Med. Jour., 1906, vol. i, p. 250.
4. In addition to the authors cited in the text, the reader may consult the following: Paget: "Aural Cases in General Practice," Brit. Med. Jour., 1906, vol. i, p. 248; Kopetzky: "The Diagnostic Significance of Headache in Diseases of the Ear, Nose and Throat," N. Y. Med. Jour., 1905, vol. lxxxii, p. 1159; Knapp, P. C.: "A Case of Otitic Purulent Meningitis," Jour. Nerv. and Mental Diseases, 1905, vol. xxxii, p. 738; Roughton: "Clinical Lecture on Cerebellar Abscess, etc.," Lancet, 1905, vol. ii, p. 1597; Barnhill: "Diagnosis of Intracranial Complications," THE JOURNAL A. M. A., 1905, vol. xlv, p. 1486; Jervey: Med. Record, N. Y., 1899, vol. v, p. 351; Vansant: Phila. Med. Jour., 1899, vol. iv, p. 484; Dundas Grant: Jour. of Laryngology, 1899, vol. xiv, p. 457.

It is in the cases of old chronic suppuration, however, that we are most likely to have the more enduring forms of headache. These cases may run their course for years, without any particular symptoms. There may be so little discharge that it is regarded as wax, and the diminished hearing has ceased to annoy the patient, he is so accustomed to it.

Exfoliated epithelium and other products of long-continued suppuration collect in the cavities of the middle ear and mastoid, often forming masses as large as a peach stone. Examination shows that these masses are built up layer by layer, one outside another, until they assume such proportions that they not only fill the unoccupied space inside the temporal bone, but by pressure necrosis actually cause absorption of extensive areas of the bone.

It is apparent even to the casual observer that such a process might reasonably be expected to announce its presence by the existence of more or less pain in the head. This discomfort is usually described by the patient as a dull heavy sensation, but it occasionally assumes a most acute form, when the suffering is almost unendurable. This exacerbation is often caused by the use of fluids in syringing the ear, and particularly by the use of peroxid of hydrogen. Because of the length of time during which this mass, or cholesteatome, has been forming, it is dry and compact. The addition of water almost immediately causes it to swell, with the result that a pressure that is simply tremendous is exerted on all parts with which the mass is in contact. In this way it not infrequently happens that facial paralysis is caused, and occasionally a purulent meningitis may be traced directly to this source.

Caries: These new formations within the temporal bone are not the only cause of headache in chronic purulent otitis media, as this symptom is frequently associated with the presence of caries, especially when accompanied by granulations. It is noticeable that patients undergoing treatment for the relief of chronic suppuration are able to realize the presence of masses of granulations even before the attending physician has discovered them. They will complain that the head feels heavy and queer, and investigation will usually reveal granular areas. Promptly following the removal of the offending growth, the uncomfortable sensations disappear.

Diagnosis: Diagnosis of the presence of chronic suppuration in the middle ear can often be made by simply noting the presence of discharge, and ascertaining the period of time during which it has existed. In perfectly typical cases, there is likely to be an extremely offensive odor, characteristic of caries. Often, however, there will be little or no visible discharge, and the conditions can be made out only by the most careful examination, using head-mirror, speculum and the other common instruments employed in aural practice. It is an exceedingly common occurrence for an ear that has suppurated at some former time to remain apparently dry for many years, with perhaps a few occasional crusts. In these cases diagnosis is not so easily made, except in the hands of one experienced in such examinations.

Treatment: Treatment should aim toward a complete removal of all diseased tissue. This may sometimes be accomplished by the use of astringent and antiseptic solutions introduced into the ear. When there is distinct caries of the bone, however, the plain surgical indication is for its removal. If confined to the ossicles, they may be easily taken out, and in certain cases not only will the suppuration be cured, but a very useful degree of hearing may be preserved.

In more advanced cases in which the disease has invaded the temporal bone, it may be that nothing short of a complete radical mastoid operation will be curative. In any event cessation of discharge will probably mean relief from headache.

CONSTITUTIONAL HEADACHES.*

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A young woman complains of constant headache of many years' duration. Being asked if it is really continuous she answers, "Certainly, it never leaves me day or night." The headache is not distinctly localized. There is an obvious refractive error, but its correction affords no relief. There is obvious nasal defect, the treatment of which is negative, a possibility Dr. Coakley has emphasized. There is malposition of the uterus, but local treatment proves inefficacious, and the patient returns to the neurologist ready for the next therapeutic procedure. I assume, of course, that organic disease of the brain, kidney or other organ has been eliminated and that no toxic cause has been discovered. What is the probable diagnosis? Constitutional headache.

This symptom is included among the stigmata of so-called degeneration or, as I prefer to name it, deviation, but its adequate description and pathogeny I do not find. I propose, therefore, to give my own idea of it.

What Constitutional Headache Is.—The patient may show no special physical peculiarity except perhaps unusual delicacy or, perhaps more frequently, she presents many signs of deviation from the average normal, either physical, physiologic or mental, or all three. On the physical side we may find a too prominent forehead, a projection of the lower teeth beyond the upper, peg-shaped lateral incisors, hair on the face in the female, or absence of hair if the patient be a male, marked facial asymmetry, and badly formed or badly set ears. On the physiologic side we may find a hypersensitiveness to sights, sounds or thoughts, sometimes associated with an extreme acuity of special sense. Such patient may have vision, for example, double that of the average normal. On the mental side we are peculiarly liable to find deviation. Such a patient is likely to be high-strung, intense, unable to relax either physically or mentally. Strong likes and dislikes are prominent. Even in the course of the examination the tendency will be indicated by the exaggerated self-consciousness; the fussy antagonism, the questioning of each step in the examination, the calling for a fan, or a glass of water, and the request that the window be opened or closed. Certain sources of irritation "simply drive the patient wild"; or she "simply can not bear" something, though the cause may be nothing more serious than hearing another person clear his throat or seeing him rock. The patient herself, meantime, may be obviously addicted to some obsessive habit as grunting, sniffing or blinking, if not to habit chorea. *Folie du doute*, the touching habit, hypochondriacal ideas and chronic indecision may complete the picture, for which I venture to coin the word obsessia, since all these faulty mental habits may be analyzed into obsessive tendencies. A striking example

* Read in the Section on Practice of Medicine of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

of this mental peculiarity told me recently that she perfectly abominated cereals, that she simply could not stand vegetables, that she could not bear anything in the shape of an apple, that she could not abide spinach, and that baked beans made her sick at the stomach. The habit movements, the grunting and allied actions are performed by such an individual in response to a feeling that she must make them or explode. The hypochondriacal ideas result from such an obsessive desire to feel comfortable, that any variation from perfect comfort becomes unendurable.

This line of thought prepares us to appreciate the probable nature of the constitutional headache. In its typical form this headache is not perhaps what the average normal individual would call a headache at all. It is merely rather an uncomfortable sensation which is so irksome to the ideo-obsessive, and becomes so aggravated by the focusing of her attention on it that at last only such terms as agonizing, frightful and excruciating seem adequate. In ordinary parlance such a headache should lay the patient low, whereas she sits in the neurologist's office at the end of a long examination perhaps smiling and complacent, explaining her own ability to do so by the fact that she has an extreme degree of will power. She has ample will power but it is ill directed.

In other words, this headache is probably the patient's interpretation of the ordinary sensations resulting from cerebral activity. The sense of mental fatigue, for example, may be more acutely realized than in the ordinary individual, besides being really excessive, because the mental processes, though ill directed, are kept up more continuously than in the average individual through the patient's inability to mentally relax. This produces the vicious circle. The headache in this case is only another sign of deviation, of which the error of refraction, the congenital nasal or uterine defect are merely other indications.

The Constitutional and the Reflex Headaches.—There is perhaps no sharply dividing line between the constitutional and the purely reflex headache. The ticking of a clock may be the exciting cause of insomnia, but the very fact that a clock tick keeps a person awake indicates a sensitive organization on her part which constitutes the underlying cause. Pollen may be the exciting cause of hay fever, of which, however, the primary underlying cause must be the unfortunate constitution of the individual which renders him susceptible. Similarly, when we credit a quarter of a diopter of astigmatism with being the cause of migraine, it would probably be more accurate to say that the error of refraction is the exciting cause, while the primary and underlying cause is the inherited constitution of the patient which renders him susceptible. In other words, between the purely reflex headache on the one hand, and the purely constitutional on the other, there are doubtless a large number of cases in which the two elements are so combined and so interdependent that it is only viewing one side of the shield to class the headache as either purely reflex or purely constitutional.

Treatment.—The treatment of constitutional headache is obviously not hopeful, for its eradication would involve an entire change in the patient's inherent make-up, including susceptibility to fatigue. The correction of obvious ocular, nasal, uterine or other defect is indicated by way of giving the reflex element the benefit of the doubt. Special drugs are of no value, though it is, of course, indicated to build up, as far as possible, the patient's general condition not only by drugs but by exercise, diet, baths and the regulation of the habits. If by mental training the patient may be led at least to modify the obsessive tendency, a step has been made in the right direction.

CHRONIC HEADACHE ASSOCIATED WITH PELVIC DISEASE.*

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By chronic headache, as I understand it in this discussion, is meant not a constant headache, but one which recurs at more or less frequent intervals and is of a uniform type. This symptom is not very common in connection with pelvic disease. In taking 1,000 cases from my note book, I find it mentioned 98 times, constituting only about 10 per cent.

In studying these cases and noting the pelvic condition with which the headache is associated, I find the greater part may be placed under two heads. First, those connected, as regards to time, with the menstrual function; second, those which seem to be due not especially to the particular pelvic disorder found in the case, but that seem to be an expression of the neurasthenia of which the pelvic lesion is one of the predisposing factors.

1. Due to Menstrual Disturbance.—Taking the first group, I find that 30 cases, or about one-third, are directly associated, as regards time, with menstrual disorders, and the one abnormality which is constant in these cases is a diminution of the amount of blood lost, either from scanty flow with the regular periods, or from delayed menstruation, the interval being more than four weeks, or from both irregular and scanty menstruation combined. In many of these cases menstruation occurred very irregularly, from five weeks to two or three months between the periods.

The most common type of headache found in these cases comes on a few days before the flow occurs, lasting from one day to several, and ceasing promptly as soon as the flow is established. The headache usually precedes the period, but in a few cases in which the flow is fairly regular, but scanty, the headache appears after the period. This type frequently accompanies chronic metritis, when tissue changes have taken place in the uterus and the organ has become cirrhotic. Headaches occurring during the flow are very rare.

The explanation of this form of headache is obvious. There is a hindrance to the normal free and sufficient escape of blood, and as a result a pelvic congestion. This interference with the pelvic circulation shows itself by disturbances elsewhere and the headache is a manifestation of this.

The treatment for this variety of headache consists, first, in general measures to improve the patient's health with the hope that there will be coincidently a change for the better in the rhythm and amount of the menstrual flow. As a rule, these patients are delicate, weak, anemic, and anything which will make them stronger physically is of value. These measures readily suggest themselves and are those which are usually employed in such cases without reference to the particular cause of the trouble or the special form in which the symptoms manifest themselves. The most important are improving the

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* Read in the Section on Practice of Medicine of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

digestion by insisting on as much food as can be assimilated and of a quality which will not tax the digestive organs. Regular and suitable exercise to improve the muscular tone is of great importance. Freedom from mental strain, as study in the case of young girls and social dissipation in those older, should be insisted on.

In other words, measures which will make blood, improve its circulation and steady the nerves will tend to regulate this function. For this purpose drugs are an adjunct, but should not be depended on alone. The most important are iron and manganese, which physiologically tend to improve the quality of the blood. Hand in hand with these general measures and for the relief of the headache itself, local treatment should be employed, and in this way much more direct and quick improvement can be attained. If Nature does not provide relief by a prompt escape of a sufficient amount of blood, local depletion should be employed.

Of the various methods suggested for this purpose there is none which is so simple in its application and so efficient in its results as the use of wool tampons soaked in glycerin. As soon as the slightest suspicion of headache makes its appearance, or even anticipating this by a day or two, such a tampon should be inserted into the vagina and allowed to remain for two days. The result will be a profuse watery discharge of blood serum which relieves the engorged pelvic blood vessels and equalizes the circulation. At the end of the second day the tampon should be removed and a second substituted. These should be applied every second day until the flow appears.

It is not an uncommon occurrence for the patient to experience marked relief within a few hours after the first treatment, and the headache to be kept in check during the whole premenstrual epoch. If repeated before every menstruation for several months, the period of headache is shortened and in many cases a cure is effected. In the cases in which the headache follows instead of precedes the menstruation, the same treatment should be instituted as soon as the period is over and kept up for several days.

2. *Due to Neurasthenic Condition.*—The second largest group in my series of 98 cases consisted of 23 in which the headache seemed clearly due to neurasthenic condition. They were not associated particularly with the menstrual period, but were brought on by overfatigue, either mental or physical. There was usually, to be sure, some accompanying local pelvic lesion, but that varied indefinitely and did not seem to be the cause. The important question here is as to the propriety or necessity of doing anything for the local difficulty, and my advice is as follows:

Unless there is some weighty reason for not remedying the existing trouble, I usually advise it on the ground that the pelvic disorder, if not the cause, is, at least, a factor in keeping the nervous system below par, and that the patient will improve faster and more surely if this additional source of trouble is removed.

It is not within the scope of this paper to go into a detailed statement of the treatment of these cases. I think that headache is not a common symptom of other pelvic conditions. It was noted in only 14 cases out of 130 retroflexions and versions. There were 13 cases of anteversion, but most of these had at the same time scanty or irregular menstruation, and were probably of a poorly developed type. Some prolapse or enlargement of the ovary was found in 8 cases. Laceration of the cervix was present in 16 cases, and that is significant as emphasizing the fact that lacerations and irritations of the cervix frequently manifest themselves more by reflex disturbances than by local symptoms. In only 4 cases of fibroid tumors and none of ovarian was headache present as a symptom.

CONCLUSIONS.

1. Chronic headache associated with pelvic disease is accidental, except when it is the most marked symptom or irregular or scanty menstruation.

2. In other pelvic disorders, it is usually an expression of the neurasthenic condition of which the pelvic lesion is merely one factor or accessory predisposing cause.

3. Treatment for the first class of cases consists of general building up measures and local depletion.

4. Treatment of the second class consists in the rectification of existing local trouble unless especially contraindicated, but the main reliance is to be placed on prolonged and systematic treatment of the neurasthenia.

INJURIES TO THE CHILD'S HEAD DURING LABOR.*

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For many years I have been anxious to enlist the interest of the obstetrician and of the general practitioner in the injuries which the child's brain is apt to sustain during parturition. The general opinion prevails, and it is not wholly wrong, that the child's head is wonderfully tolerant and that the child is none the worse for prolonged labor and for instrumental delivery. The physician who has delivered a woman of a living child without seriously injuring the mother and without leaving on the child the outward mark of difficult labor feels proud of his achievement, and if the child has no convulsions during the first 24 or 48 hours of life, if it appears to move all its limbs, the physician walks away with pride and an easy conscience. He has done his duty according to his own best light and in accordance with the best teachings of the day. So long as the sounds of the child's heart remained normal there was no apparent reason to hasten the birth of the child and his entire concern was for the health of the mother. That she deserves prime consideration I shall be the first to allow, and yet I say deliberately that the world is full of imbeciles, of paralytics, of epileptics, not only in our almshouses and public institutions, but in some of our best families, who might have been normal individuals if they had been given a "square deal" at the time of birth.

Let us see what happens and whether the matter can in any way be remedied. In a course of studies which I began years ago with Dr. Peterson, my attention was attracted to the fact that of all the cases of infantile cerebral paralysis a very considerable number were either first-born children or had been born after prolonged, often dry, labor. Careful statistics of several hundred of such cases showed that less harm is done by instrumental delivery than by prolonged labor. It is easy to understand, however, that unskilful instrumen-

* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

tal delivery has been a frequent cause of trouble. In first-born children and in those born after difficult labor the skull and the brain are apt to be seriously compressed. As a result of this compression, hemorrhage takes place from the minute vessels, particularly the veins of the pia, and an effusion of blood follows, covering a smaller or greater portion of one or both hemispheres.

In the case of forceps delivery, as well as in many of the prolonged labors, the hemorrhage is apt to occur over one or both motor areas, and this one fact accounts for the frequent occurrence of spastic hemiplegias or diplegias that are developed in very young children. If the hemorrhage takes place over other parts of the brain a condition of imbecility or of epilepsy may develop with little or no paralysis.

From an etiologic point of view it matters not whether there is paralysis, idiocy or epilepsy; one or often all of them are developed and may be due to conditions present at the time of birth. It is in only the extreme cases that the symptoms of the injury done are so manifest that the physician in attendance can observe the harm done. In a large number of cases slighter hemorrhages have occurred, and the symptoms of paralysis, of imbecility and, above all, those of epilepsy are developed only within weeks, sometimes months, after birth; but the causal relation between the conditions at birth and the subsequent illness is none the less certain.

I am firmly convinced that protracted labor is the most powerful factor in these conditions. More than ten years ago I said, in my book in a chapter in which the obstetrician would not be so apt to find it, that the prolonged compression of the skull during the last month of pregnancy would seem to exercise considerable influence on the development of cerebral spastic palsies, but that the chief damage is done during the period of actual labor. If physicians were more confident of the safety of the forceps and of their own skill to apply them, protracted labor would not be so powerful an etiologic factor as it is at present.

A word of warning, therefore, should be uttered to the obstetrician that, other things being equal and, above all, the life of the mother not being in danger, it is wise to curtail the period of labor as much as possible and not necessarily to wait until the child's heart action becomes feeble. Many children might have escaped epilepsy, idiocy and paralysis if the period of labor had been properly managed.

For the severe cases of meningeal hemorrhage at birth Cushing has recently suggested the opening of the skull, a washing out of the blood clots, and, so far as I know, he has practically cured two of four children on whom this plan has been tried. The procedure is a daring one and it will apply only to relatively few of the cases and would not be at all applicable to that larger number of cases in which the injury at birth is not so apparent and in which the full consequences of protracted labor or of unskilful instrumental delivery are in evidence only weeks and months after birth. If the condition has once been established which gives rise to paralysis, epilepsy or imbecility, little can be done by the physician, however painstaking he may be. The hemorrhage that has occurred is bound to be followed by secondary processes and the normal development of the cortex and of the other parts of the brain and central nervous system associated with it will be interfered with. We must depend wholly either on prophylactic measures or on more skilful manipulation of labor on the part of the obstetrician. How the practice of to-day may be modified, obstetricians must determine. But I can not help feeling that the medical men in attendance at confinements have for years followed a policy of indifference toward the welfare of the child and have allowed too many children to be born into the world after labor unnecessarily prolonged and in conditions that are a distinct disadvantage to society and to the individuals for the entire period of their natural lives.

DISCUSSION.

DR. EFFA V. DAVIS, Chicago, said that as a matter of fact the head of the infant is intended to stand a tremendous amount of pressure. She said that instead of using the forceps, a much safer plan is the regulation of the size of the child, which she believes can be controlled. The mother must be under strict supervision, especially in the higher class of patients who have great leisure. The children which she has seen who have become paralytic have been children of degenerate parents.

DR. C. G. KERLEY, New York City, declared that he has been impressed with the fact that there are more of these cases than there should be. Dr. Sachs' views bear out Dr. Kerley's in relation to the cause being rather the trauma taking place in prolonged labors than actual injury with the forceps. Many such cases are seen, he said, in out-patient and in private work, and it has not been his observation that a family history of degeneracy has had much to do with it.

DR. R. B. GILBERT, Louisville, Ky., quoted the old adage that an ounce of prevention is worth a pound of cure, and said that it is applicable in a matter of this sort, because the cure of infants injured during parturition has not been satisfactory. The measure suggested by Dr. Sachs, he said, does not commend itself to him. He has seen a number of these injuries, and several years ago adopted a method which has proved satisfactory—that of inducing labor two or three weeks prior to full term, making the labor safe for the infant and often much safer for the mother. He never puts an instrument into the uterine cavity, but uses tampons soaked in glycerin, daily increasing the size of the tampon. The method facilitates labor and the child is born two or three weeks ahead of time, and there is scarcely a chance for injury. One woman with deformed pelvis, who had had hip disease early in life, he delivered in that way four times and each of the four children was born in safety. To be sure, they were reared in incubators, but at the end of the seventh month the labor was made entirely easy in this way. Dr. Gilbert suggested the method as a prophylactic measure rather than the application of the forceps to which Dr. Sachs called attention.

DR. J. C. COOK, Chicago, stated that in many years' experience in a good-sized clinic he has put forth every effort to establish the relation between cerebral palsy and labor and without success. None of the children, the subjects of long and tedious twenty-four- and fifty-two-hour labors, has had palsy. Neither has Dr. Cook been able to establish any relation between palsy and the first child. In his experience it is not the first children who are afflicted, but may be the second, third or fourth. He feels that the great majority of these cases are due to some pathologic condition in the brain or blood vessels, either prior to or after labor. The majority of cases have seemed to him to be either prenatal or postnatal in origin rather than due to injury received at the time of birth.

DR. B. SACHS, New York, said that his reason for bringing up the subject was to get the members of the Section to further the cause of respecting the child at birth as well as the mother. Physicians have been taught that the mother is to be considered. Of course she is, and she is of prime consideration; but the child gets far less consideration than it deserves and far less than obstetricians are able to give it. Dr. Sachs said that he has given the subject much attention since 1890, when he published his first paper in connection with the cerebral palsies. He believes that those familiar

with recent text-books will know that they credit him with the division of these cerebral palsies of children into three groups. Dr. Sachs made the division into prenatal palsies, those due to accidents at birth and those that are of postnatal origin. With the first and last obstetricians have nothing to do, but there remains a very considerable number of cases in which the palsies are absolutely the result of accidents at the time of labor, and nothing else. The anatomic proof has been given in several instances in which children were born with all the symptoms which are now associated with cerebral paralysis due to difficulty in labor, the child dying after a few days. Dr. Sachs stated that there can be no doubt about the baneful influence of difficult labor on the brain of the child. The marvel is that so many children escape.

PREGNANCY AND LABOR COMPLICATED BY ANTERIOR FIXATION OF THE UTERUS.*

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In 1886, ventrofixation was welcomed. We felt that at last a positive means for curing the retroverted uterus had been found. The early operations surely accomplished the purpose sought for. The uterus was firmly fixed to the anterior abdominal wall by sutures; in some cases, in addition to this, extensive scarifications produced strong fibrous adhesions. The results of these operations were most gratifying. The symptoms complained of disappeared rapidly. All went well until we began to hear of complications developing during pregnancy and labor, complications causing so much obstruction by the firm and thickened anterior wall of the uterus that at times the most serious operations in obstetrics were demanded in order to accomplish the delivery.

With the news of these complications, cases that only time could produce, we now find the various operators modifying the procedure, some using a single stitch to fix the uterus, others removing all sutures in two weeks, a third class including only the peritoneum in the tension-suture; and so on, we might mention the various operations, all having the purpose of obviating the complications in future pregnancy and labor. Anticipating the danger of future trouble, some operators have made the attachment to the abdominal wall so slight that I fear a careful examination in a certain proportion of cases might find the uterus just where it was before the operation and the patient complaining again of her old symptoms.

Ventrosuspension, the operation performed to-day, is primarily also a fixation. It becomes a suspension only when Nature is good enough (possibly in anticipation of future pregnancy) to permit the uterus to leave the point of attachment, a ligament forming, which varies in length, thickness and elasticity. Gillette[1] says that "no operator can ever know with certainty the degree of strength of his made attachment, and for this reason can never know whether it will be sufficient to hold the uterus in place and yet not interfere with the normal development of the uterus during pregnancy." The fact that these new made bands do not always enlarge with the growing uterus, as do the round ligaments and other uterine structures, is a reason for the immeasurable mischief that they occasion. Again, should the fixation-suture become infected, an accident that can not always be guarded against, no matter how skilled the operator, the uterus may remain fixed.

Vaginal fixation, at one time resorted to, has been abandoned on account of the serious dystocia following pregnancy. A difference of opinion still exists among surgeons as to the effect of ventral fixation, or suspension, on the course of pregnancy and labor. Many of the text-books still recommend it, attributing the complications that sometimes follow to errors in technic. Beyea[2] says: "The complications that are said to ensue nearly all occurred in operations performed before 1896, when ventrofixation was performed, not ventrosuspension. The literature furnishes no proof that ventrosuspension is attended with complications." He described 42 cases of pregnancy and labor following operation, and in no instance was there a complication; also, in none of his 500 cases reported did ileus or other accidents follow.

Kelly[3] enumerates three objections to the operation of ventrosuspension as usually performed and thinks that his operation, if properly done, overcomes them all: 1. The operation substitutes a fixed, unnatural anteflexion for a retroflexion. 2. It interferes with the natural distension of the bladder. 3. In the event of pregnancy occurring after suspension, the patient's life might be imperiled by the inability of the uterus to develop normally.

Kelly further says that an experience of six years has brought a satisfactory answer to each of these queries in favor of the operation. While in the majority of cases ventrofixation does not complicate pregnancy, the impression has gradually gained ground that dystocia may follow in a certain proportion of cases; so that many surgeons have abandoned its use in child-bearing women.

Gillette[1] states: "Reports of such disasters have now become so numerous that I think this operation has had its day and will soon be relegated to the junk heap occupied by many another pernicious discarded surgical procedure."

Ten years elapsed before we began to appreciate fully the obsetric complications.[4] In the past decade we have accumulated sufficient material to say definitely that a new chapter has been added to obstetrics. This chapter, I feel, will be enlarged on in the future, unless the operation is abandoned.

In this paper it is my purpose to consider some of the complications that are liable to occur during pregnancy and labor, to review three cases,[5] and, finally, to study briefly the literature for the purpose of determining whether either operation is justifiable from the obstetric standpoint.

CASE 1.—*Ventrofixation followed by Obstructed Labor, Sloughing of the Cervix, and Vesicovaginal Fistula.*

Mrs. W. was admitted to the Philadelphia Lying-in Charity, June 9, 1897.

History.—She had had one child at term. Two years before, ventrofixation had been performed. She had had two miscarriages since, and she came to us pregnant for the fourth time, the uterus now carrying the fetus to term. She stated that she had fallen in labor 18 hours prior to admission, and that her physician had twice applied forceps without success.

Examination.—She was much exhausted from the long labor. She had fever and rapid pulse. The fetal heart could not

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

1. Gillette: Ohio State Med. Jour., August, 190

2. Beyea: Penna. Med. Jour., May, 1906.
3. Kelly: "Operative Gynecology," 1902, vol. ii.
4. Noble: Amer. Jour. Obstet., August, 1896.
5. Two of these cases have already been reported; the third case demeanded Cesarean section.

be heard. Internal examination revealed the cause of the dystocia. The posterior lip of the cervix was drawn up and posteriorly, the anterior uterine wall acting as an obstruction to the engagement of the cephalic extremity. With the long labor, the death of the infant, and the excessive moulding of the presenting part, it had at last made some descent.

Operation.—The patient (in bad condition) was anesthetized; and the edematous and injured cervix was dilated. Forceps were then applied to the much-moulded head; and, with axis-traction, she was delivered. The infant weighed seven pounds. The lacerated cervix could now be easily felt, and the thickened anterior wall of the uterus, which had caused the obstruction.

Postoperative History.—After as careful a toilet as was possible with the patient in so bad a condition, she was put to bed. As might have been expected, she developed a rapid putrid infection, with high temperature, rapid pulse and offensive lochia. The anterior lip of the cervix sloughed off; and with this, a portion of the floor of the bladder. A vesical incontinence was then explained by a fistula.

She improved slowly, but it was not until one month after her delivery that she was in condition to make a repair of the bladder injury. The fistula was found high up in the left side of the cervix, and communicating with an extensive laceration of the latter. It was first necessary to repair this laceration; then the fistula was closed with silver wire sutures. The stitches were removed in two weeks, and the patient was discharged in good condition.

CASE 2.—*Ventrofixation, followed by Pregnancy. High Position of the Cervix and thickened anterior Wall of the Uterus. Labor prematurely Induced.*

Mrs. W. aged 33, was admitted to the Philadelphia Lying-in Charity, Jan. 15, 1898.

History.—She had had three children, all living. Three years before, one ovary had been removed and ventrofixation performed. She menstruated regularly after this operation until May 18, 1897. After having missed her first period, she had a show every two weeks for three months. Fetal movements were felt in September. In December there was a show, with great pain, for three weeks; and at the same time there was lumbar pain and irritability of the bladder, accompanied by a constant dragging pain in the sacral region and lancinating pain at times. Both inguinal regions were the site of continuous pain, but it was most severe in the left side and down the thigh.

Examination.—On admission, she was found to be pregnant seven and one-half months. The ovoid was presenting by the breech. Internal examination was accompanied with pain; it was difficult to reach the cervix which had been drawn upward and posteriorly; the anterior wall of the uterus was much thickened, and seemed to offer an obstruction to the engagement of the presenting part. External version was performed, and the patient was kept in bed with lateral compresses to the uterus. We succeeded without much diffifficulty in keeping the head at the pelvic inlet.

Operation.—Fearing that by allowing the patient to go to term we might have greater trouble, it seemed wise to induce labor at the eighth month. This was carried out Jan. 29, 1898, by introducing two rubber bougies into the uterus. This was followed by slight pain and an unfortunate rupture of the membranes. The pains gradually became more frequent and severe, but were not accompanied with dilatation. After fourteen hours without any real progress, the cervix dilated to the size of a quarter dollar. We gave ether, and terminated the labor with forceps. Some difficulty was experienced in dilating the cervix.

During the operation it was noticed that, although the fetal heart had been closely studied during her labor, the waters were stained with meconium. We feared the death of the infant: and, unfortunately, we were right. The cord was pulseless, and the fetal heart could not be heard.

CASE 3.—*Ventrofixation; Labor Obstructed; Anterior Wall of the Uterus Greatly Thickened, Resembling a Fibroid Tumor; Cesarean Section.*

Mrs. M., aged 33, a multipara was seen by me in consultation, Feb. 15, 1906.

History.—The first-born of her children is 10 years old. This labor had not been difficult. Two years after the birth of this child, and eight years ago, the uterus, for the relief of retrodisplacement, was suspended to the anterior abdominal wall. A stitch-abscess prolonged the convalescence. Three years after this operation, her second child was born after a difficult labor, which ended with forceps. The child was born alive.

Present History.—The patient is pregnant at term, and already twenty hours in labor. She stated that she has had much discomfort throughout the pregnancy, chiefly a dragging sensation and pain in the ovarian region. The membranes had ruptured soon after the onset of labor. The pains at first were strong and intermittent, but now are less severe and almost continuous.

Examination.—The uterus, the size of a pregnancy at term, was irregular in shape, suggesting a transverse presentation. A marked depression was seen on the abdomen, at the place of the attachment of the uterus to the abdominal wall. The pelvis was normal in size and shape. The vagina was dilated, and the cavity of the pelvis empty. High up, near the sacrum, the cervix was felt with difficulty. Even after a test of twenty hours' labor, the cervix was not dilated. A large mass, the thickened anterior wall of the uterus, was felt at the brim of the pelvis, completely occluding the inlet. With difficulty the finger was inserted into the cervix, and the presenting part could not be positively diagnosed. The child was in an imperfect oblique position, with the head to the right. The fetal heart was heard, but not distinctly.

Operation.—As the patient had been a long time in labor, with some of the early symptoms of obstruction, she was immediately prepared for operative interference. Anticipating section, several hours elapsed before ether was given her. Even with the relaxing effect of anesthesia, the cervix remained high, and the obstructing tumor could not be displaced. Craniotomy could not have been performed. Cesarean section was the only method of delivery possible.

On opening the abdominal cavity, the uterus was found bound down in front. It was drawn into the wound; a longitudinal incision was made; and the child was rapidly extracted. Then the tumor (the hypertrophied anterior wall of the uterus) could be distinctly felt as a spherical mass projecting into the cavity of the uterus. After liberating the uterus from its point of attachment to the anterior abdominal wall, the incision, now on the posterior wall of the uterus, was closed. Convalescence was uneventful, and mother and child are doing well.

COMPLICATIONS TO PREGNANCY AND LABOR.

If the uterus is found fixed, it is more likely to occasion dystocia than when it is suspended; but even in this case trouble may follow, as illustrated in a case reported by Gillette,[1] in which death resulted from internal hemorrhage following the tearing loose of the suspensory ligament from its uterine attachment. It has brought with it a flap of uterine tissue about the size of a silver dollar. In many of the later cases reported the trouble followed a suspension carefully performed.

The complications have been tabulated by Kelly[3] as follows: 1. Marked retraction of the scar, due to the tugging of the adherent uterus. 2. Constant hypogastric pain. 3. Retraction and displacement of the cervix, even up into the abdominal cavity. 4. The formation of a tumor obstructing the pelvic inlet, resulting from hypertrophy and deficient expansion of the anterior uterine wall. 5. Excessive thinning of the posterior wall of the uterus. 6. Abortion or premature labor. 7. Persistent and excessive nausea.

During labor the following complications may be noted: 1. Prolongation of the pregnancy. 2. Inertia of the uterus, due to excessive thinning of its walls. 3. Dystocia, due to the tumor formed by the contracted anterior wall of the uterus. 4. Inability of the cervix

to dilate, owing to its abnormal position. 5. Increased frequency of abnormal presentations. 6. Rupture of the scar of fixation. 7. Rupture of the uterus.

In 1905, Andrews[6] collected from foreign and American literature 395 cases of pregnancy following ventrofixation. This report included Noble's[4] cases, collected in 1896. In 259 of these cases the labor was normal; the remaining 146 cases were complicated in some way.

Abortion occurred 36 times; that is, in almost exactly 9 per cent. So far as these figures go, they do not point to a special liability to abortion after ventral fixation. He further says that we must consider, on the one hand, the fact that several of the patients had had abortion before the operation and, on the other hand, that unsuccessful results and uninteresting cases are not so likely to be reported as are successful results and interesting cases, such as those in which labor is terminated by Cesarean section.

Dragging sensations, pain, dysuria, and vomiting were present. In one case collected by Noble[4] premature labor was induced because of persistent vomiting. High position of the cervix was recorded in 22 cases. This is the most common difficulty met with after ventrofixation. Cesarean section was necessary in 20 cases. In each case the cervix was high, and in many the fetus could not be reached from below. Rupture of the uterus was noted in 3 cases. This accident may take place spontaneously, owing to the extreme thinning out of the uterine wall, or may follow attempts at version.

Clark and Bowley[7] report a case of fixation performed in 1901. In 1903 she became pregnant and went to term. The fetus was in transverse position. The cervix was high, and the anterior wall of the uterus much thickened. Internal version was decided on, when a rupture of the uterus was discovered. Cesarean section was immediately performed and the patient recovered. In my case demanding Cesarean section the cervix was above the sacral promontory.

Dickinson performed Cesarean section in a case in which the external os lay against the sacral promontory and the internal os was higher than the first lumbar vertebra.

In 1904 Lynch[8] collected also 20 cases of Cesarean section performed for fixation. Some of these cases are included in Andrews'[6] report. In 19 of these cases the position of the cervix was mentioned. It was situated above the promontory of the sacrum. The pelvis was normal or only slightly contracted in every case but one. Twins were noted in 2 cases. There was transverse presentation in 15 cases. Vertex was noted in 3 cases; the breech, in 2 cases; in 3 others the position was not given. In these 20 Cesarean sections, the maternal mortality was over 38 per cent., and in the 18 cases in which the result to the fetus was noted there was a mortality of 44.5 per cent.

In 1896 Dorland[9] tabulated 179 cases of pregnancy following this operation. In only 38 per cent. was the pregnancy uncomplicated. In 14 per cent. of the cases abortion and premature labor occurred.

	Cases.	Per cent.
Retraction of the cervix to the level of the promontory, or higher	10	7.0
Threatened rupture of the uterus	9	6.5
Abnormal presentations	9	6.5
Serious dystocia	23	17.0
Postpartum hemorrhage	3	2.2
Retained placenta	3	2.2

Version was performed nine times; three children died. Forceps were used eleven times; three children died. Cesarean section was resorted to six times; three mothers and three children died. Craniotomy destroyed one child; one child died after a breech extraction, and one mother perished with a retained dead fetus. The maternal mortality was 14 per cent.; the fetal mortality, 58 per cent.

These statistics and my experience with the cases herein described make me feel that it is unwise to perform fixation or suspension of the uterus before the menopause.

Lynch[8] says: "I am inclined to take the ground that neither procedure is justifiable until after the menopause, as it does not seem proper to undertake an operation for the cure of a condition that does not threaten the life of the patient and merely exposes her to a certain amount of discomfort, when we know that it may give rise to most serious dystocia should she become pregnant."

The high fetal and maternal mortality following dystocia, especially after Cesarean section (almost 50 per cent.) makes it very important that all cases be very carefully studied in order that a careful diagnosis of the extent of obstruction may be ascertained. I take it that the appalling mortality has been due in part to an inaccuracy of diagnosis and to the too long indulgence in temporizing methods of treatment. Should the patient become pregnant, it is important to look immediately for symptoms that suggest suspension or fixation. These are nausea, vomiting, irritable bladder and dragging pains. Vaginal examinations should be repeatedly made for the purpose of ascertaining the position of the cervix and the anterior abdominal wall. In early pregnancy it will be possible to liberate the uterus by abdominal section. When the patient is seen only just before labor, this procedure is contraindicated owing to hemorrhage and the fact that liberation of the uterus does not remove the obstruction in the anterior wall.

Goubaroff[10] and Bidone[11] report a case in which, during labor, the uterus was liberated without benefit. It was finally necessary to dilate the cervix artificially and perform craniotomy.

Dorland[12] and Noble[4] have advised the induction of labor (at the eighth month) whenever a study of the case threatens difficult labor.

Lynch[8] thinks that the field for the induction of premature labor is extremely limited, for these reasons:

1. It does away with the possibility of spontaneous labor at term.

2. It is associated with a tremendous fetal mortality.

3. The operation may prove to be extremely difficult in the cases in which it may be indicated, and in some instances prove impossible of accomplishment. In my second case reported, labor was induced at the eighth month of gestation; but, failing in this method of treatment, it was finally necessary to perform an accouchement forcé. I am opposed to inducing labor in this class of cases, as I am opposed to its use in contracted pelves. The difficulty in estimating the length of gestation and the high fetal mortality makes it wiser to let the patient go to term and have the test of labor.

In the latter months of gestation the shape and size of the uterus must be studied and the position of the fetus determined. If the uterus is fixed, the fetus will

6. Andrews: Jour. Obstet. and Gyn. British Empire, August, 1905.
7. Clark and Bowley: Johns Hopkins Hosp. Bull., March, 1905.
8. Lynch: Johns Hopkins Hosp. Bull., May, 1904.
9. Dorland: Univ. Med. Mag., December, 1896.
10. Goubaroff: Medical Week, Paris, vol. iii, 1895.
11. Bidone: Distocie gravi da isteropessi atti della Societa Italiana de obstetricia e ginecologia, 1896, vol. iii, p. 258.
12. Dorland: Amer. Jour. Obstet., January, 1897.

often occupy an oblique or transverse position, and the cervix may be drawn upward and backward. Occluding the inlet of the pelvis may be found the much hypertrophied anterior wall of the uterus. When these symptoms are found at term, the case should be looked on as greatly complicated. The progress of labor is usually retarded. It is often ushered in with the rupture of the membranes. As a rule, the pains are abnormal. Usually they are not severe and soon lose their intermittent character. Owing to the unequal development of the uterus, the anterior wall much thickened and the posterior wall greatly thinned, the cervix does not dilate.

If, after the patient has had the test of labor, the cervix is within reach, it may be manually dilated and the forceps or version resorted to. If the cervix is within reach and an obstructing tumor is found, it may then be necessary to make Dührssen's incisions of the cervix before applying the forceps.

In exceptional cases this course will not suffice, and the Cesarean section must be resorted to. The fallacy of allowing Nature to take her course or of attempting the forceps operation without first dilating or incising the cervix, the first case reported illustrates. These remarks, I hope, will prompt a discussion, not of the various methods of performing ventrofixation or suspension, but of the wisest methods of treating pregnancy and labor, should they be so complicated.

1909 Spruce Street.

DISCUSSION.

DR. S. P. WARREN, Portland, Me., said that he had just passed through his first experience with labor following a ventrofixation, in which the gestation was or had been normal. He was called in consultation as to the method of delivery. The labor had taken the course which seems to be classical in these cases; beginning with escape of the waters without pain, then pain commencing after a few hours and steadily increasing. After thirty-six hours there was no presenting part, the cervix was just above the reach of the finger and far back, and pains were severe. He advised laparotomy and freeing of the adhesions, and Cesarean section if necessary afterward. While another consultant and himself were preparing for operation, the head was found low down in the strait, and in a posterior position, while there was decided hemorrhage. Delivery was hurried with short forceps, and as soon as the child was born there was a profuse spurting hemorrhage. Examination showed complete central rupture of the cervix, extending vertically into the body of the uterus. The tear was sutured and the patient did well. The question of ventrofixation is very important to the obstetrician. In cases of child-bearing women with retrodisplacements and constant backache, should the uterus be suspended? Suppose the woman subsequently becomes pregnant, what may the obstetrician expect. Ninety-four per cent. deliver themselves without trouble. How are the other 6 per cent. to be dealt with?

DR. J. W. BOVÉE, Washington, D. C., said that ventrosuspension or ventrofixation is an illogical operation, accompanied by instances of difficulty in delivery, intestinal obstruction and death. There had also been failure to retain the uterus in its proper position.

DR. C. C. FREDERICK, Buffalo, N. Y., used to do ventrofixation and ten years ago saw a woman die in whom he had done the operation two years previously; at that time he said he would never do it again unless the patient was sterile, or unless it was absolutely impossible for her to become pregnant. He has kept his vow. He protested against ventrosuspension. It does not hold up the uterus. He has performed the operation and later has been compelled to open the abdomen and found the ligament nearly obliterated. There are other better means of holding a retroverted or otherwise displaced uterus.

DR. F. F. LAWRENCE, Columbus, O., said that he had had no experience with women confined at term following ventrofixation or ventrosuspension, but he had had two unfortunate cases of obstruction of the bowels following ventral suspension. Two other cases gave him much anxiety; one of these aborted twice and the other three times. The latter was anxious to become a mother and submitted to a second operation. In this he separated the attachment to the abdominal wall and shortened both broad ligaments. She subsequently gave girth to a healthy child. Ventrosuspension or fixation or any other operation which destroys the mobility of the uterus cannot be considered either logical or surgical. The first movement the uterus makes is that of descent before it becomes retroverted. This descent is made possible only by a relaxed broad ligament. The logical and the surgical thing to do is to shorten the broad ligament first and, if need be, the uterosacral ligaments, according to Dr. Bovée's method.

DR. G. M. BOYD, Philadelphia, was sorry that more had not been said of the obstetric complications. The surgeon may not attend the patient during pregnancy, but if he finds his patient in a long labor with the cervix drawn up almost beyond reach, the situation is often a serious one. The patient should be carefully studied during her pregnancy, and the obstetrician should be governed by the size and position of the cervix and the position of the fetus. If the cervix is not high and the head is dipping into the inlet during the latter months the patient may go to term and through labor without complications. It is always unwise to induce premature labor in these cases.

INSTRUMENTAL DILATATION OF THE PARTURIENT UTERUS.*

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BOSTON.

The object of this paper is the consideration of the various methods of dilatation of the parturient uterus with special reference to the indications for and the results of the use of the steel dilators as a substitute for the manual methods of dilatation; particularly in those cases in which some urgent indication for the termination of pregnancy or labor is present.

In a general way the conditions which may call for a cervical dilatation may be classed under the headings of hemorrhage, toxemias of pregnancy and diseases complicated by pregnancy; and to these must be added the condition of abnormal rigidity of the cervix which nature fails to overcome unaided even after a fair trial. Various other conditions may necessitate the operation at any time, though much less commonly than the conditions named.

The various methods of dilatation which must be taken under consideration to meet these various conditions are manual dilatation, instrumental dilatation and vaginal Cesarean section; and the choice of operation must be made in each case in accordance with the conditions present, although general rules for procedure can be formulated.

MANUAL DILATATION.

There is no doubt but that the hand is the best and safest dilator which has been discovered as yet and is to be preferred to any instrument in proper cases, but its usefulness is limited by the fact that it is easily exhausted, and therefore can give satisfaction only in cases of slight or moderate difficulty, while the fact that even in these cases, the pressure of the cervical ring necessitates more or less frequent change of hands in all but the easiest operations adds markedly to the danger of infection of the patient during the operation. In cases of marked rigidity the hand is absolutely inefficient. Safe dilatation by any method depends on the recogni-

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

tion of the principle that the cervix is composed of muscular tissue and that dilatation depends on tiring out the muscle and not stretching it. Proper cervical dilatation demands in many cases such a prolonged dilatation that the hands of the operator become incapacitated for the extraction of the child which is to follow, with the result that the chances of the child are compromised to a greater or less degree, particularly if the extraction proves at all difficult, while the trauma to the vagina in a long operation adds distinctly to the danger of sepsis.

The facts that the hand is capable of exerting efficient pressure for only a limited length of time; that in patients who are not in labor the cervix must usually be partly dilated instrumentally before the hand can be used at all, as the fingers can not be passed through the internal os, in the majority of cases, until partial dilatation has taken place; and that in many cases the cervical rigidity is so marked that the force which the hand can exert is inadequate for the purpose, at least without subjecting the patient to a prolonged operation attended by a marked degree of shock and trauma, make it evident that manual dilatation is a procedure of limited usefulness and that in difficult cases or in cases in which a rapid delivery is indicated, the substitution of a more efficient method is necessary.

In most cases of placenta prævia and in cases of broken cardiac compensation complicating pregnancy, as well as in the majority of cases in which indications for immediate delivery arise after partial dilatation of the cervix has taken place, the rigidity of the cervix is comparatively so slight that dilatation can be accomplished by the hand without impairment of its functions, and in this class of cases the hand is the best dilator that we have. The dilating power of the hand must be intelligently applied, or manual dilatation becomes a source of great danger to the patient, particularly in the soft, but brittle cervix of placenta prævia. The literature of manual dilatation is full of cases which show the damage that can be done if the cervix is dilated too rapidly and without due appreciation of the possibilities of danger. The desire to hasten the operation as much as possible in the presence of threatening symptoms often leads to bad results in cases in which patience and time would obviate most of the danger.

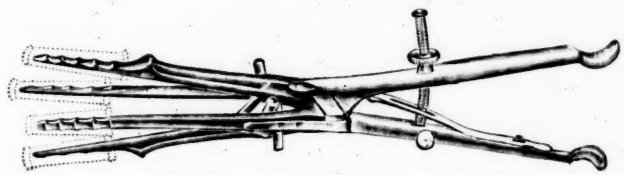
INSTRUMENTAL DILATATION.

In many cases in which manual dilatation is impossible, or possible only after a dangerously prolonged operation, the methods of instrumental dilatation find their place. In this class we must place the majority of patients with eclampsia, cases of concealed or accidental hemorrhage, and such other patients as present indications for immediate delivery in the presence of a degree of cervical rigidity which is more than moderate. In the last class are included cases in which induction of premature labor is indicated in the absence of any attempt of Nature toward taking up or dilating the cervix when there is no reason for hurry, since in these cases labor is best induced by partial dilatation of the cervix, followed by packing the cervical canal and vagina with gauze, leaving the rest to Nature. Instrumental dilatation may also be indicated in the rare cases of placenta prævia which present a marked degree of cervical rigidity.

Instruments.—The instruments which have been devised for the purpose of dilating the cervix are many and varied; from the de Ribes and Barnes elastic bags to the powerful Bossi dilator and its modifications. The field of usefulness of the elastic bags is a limited one. It may be defined as existing only in patients in whom the induction of labor is considered desirable in the absence of reasons for haste, for example, induction of labor for deformed pelvis when Cesarean section is not considered advisable, and even in these cases since a certain degree of cervical dilatation is necessary for the introduction of the dilating bags, a preliminary dilatation by means of a steel dilator is usually necessary. In placenta prævia, and in broken heart compensation, when rapid delivery is desirable to shorten the period of danger, their action is too slow to be satisfactory, while in the eclampsia, the most common indication for instrumental dilatation, all slow methods of dilating the cervix dependent on uterine irritation are absolutely contraindicated on account of the increase in convulsions which attends their use.

The earlier steel instruments were unsatisfactory owing to their lack of power and the fact that even after full expansion the degree of dilatation which they were capable of was often insufficient to overcome the rigidity of the cervix, and a more or less difficult manual dilatation was necessary to complete the operation.

The first satisfactory dilator was the Bossi dilator, a powerful four-bladed instrument, which possesses certain very definite advantages. Almost any cervix can be dilated easily and rapidly from the beginning, the application of force to the cervix by means of the four blades stretching it in all directions, while a continued pressure is maintained which is not possible in manual



The author's dilator.

dilatation by any method. When a moderate degree of dilatation is accomplished the small tips of the blades necessary for use in the undilated cervix can be covered with broad shields and the danger of cutting or splitting of the tissues by the smaller tips avoided. It has certain very definite disadvantages; it is too powerful, or rather, since the force is applied by means of levers controlled by a screw, it is possible to exert too much force and impossible to control it intelligently. Even though fitted with a device for measuring the amount of force applied it would still be dangerous, because each increase in expansion of the blades is regulated mechanically, and a very slight turn of the screw may be enough to rupture the cervix.

The ideal instrument for dilatation is one which, while capable of accomplishing the work done by the Bossi dilator, is under the absolute control of the operator. In other words, the power must be applied by the hand and be susceptible to intelligent regulation according to the resistance to be overcome. As a step in the right direction, I would instance my own dilator, which is the only one of the more powerful dilators that I have used. To my mind it has the great advantage over the Bossi that the force applied to the cervix is absolutely under the control of the operator and the use of force enough to do serious damage is an indication of lack of judgment or inexperience on the part of the operator. My own experience with it has convinced me that the cervix can be dilated from the beginning to

three quarter dilatation with no more trauma to the cervix than in a carefully conducted manual dilatation and with far less shock to the patient on account of the shortening of the operation.

Various claims have been made for instrumental dilatation which can not be substantiated, but properly performed it has very definite advantages, both for operator and patient. It has been said that in some cases the vagina is so small that it is lacerated by the introduction of the hand for manual dilatation, a danger which does not exist in instrumental dilatation. This is unquestionably true in certain cases, but the point is lost sight of that dilatation is usually followed by operative extraction and that the most complete dilatation of the vagina possible is desirable before extraction, particularly in a primipara, is undertaken. The assertion that the frequently repeated change of hands necessary in all but the easiest of manual dilatations adds greatly to the danger of septic infection, can not be contradicted and on this ground instrumental dilatation is by far the safer operation, but since vaginal dilatation is always indicated as a preliminary operation and since we have as yet no substitute for the hand in that operation, the danger of sepsis can never be entirely eliminated. The greatest advantages of instrumental over manual dilatation are: greater power, resulting in the shortening of the operation; the possibility of maintaining a constant pressure of almost any degree desired, and the saving of the hands for the operative procedure to follow. The greatest disadvantage is the possibility of serious damage if the steel dilators are employed unintelligently or in improper cases.

Method of Use.—The chief requirements for the proper use of a steel dilator are an accurate perception, which can only be gained from experience, of the degree of force which may be safely exerted in the individual case; patience to tire out and dilate instead of rupturing the cervical sphincter; and a disregard of the time consumed in the operation, only qualified by the condition of the patient. Undue haste is the greatest source of danger and an accurate knowledge of the patient's condition during the operation must be maintained to guard against this temptation, for most of us are prone to hasten the operation unduly in order to see the results of our work, thus inflicting an unnecessary degree of shock and trauma to the patient.

Technic.—The cervix should be exposed by a speculum and the anterior lip seized by the bullet forceps and drawn down to the vaginal outlet. The small tips of the dilator are then passed into the cervical canal and then through the internal os. Manual pressure on the handles to the highest degree consistent with integrity of the cervix is then applied, the cervix being kept under constant tension. The dilatation of the cervix can be observed by the eye or by the disengaged hand of the operator, who can thus estimate the degree of tension to which the tissues are subjected and judge the force which can be exerted without danger. As soon as sufficient dilatation has taken place, the larger tips are applied to diminish the risk of cutting the cervical tissues and thus starting a tear and the dilatation is continued until the point has been reached when the cervical rigidity has disappeared and the hand can be passed into the uterus and dilatation easily completed. As a general rule the cervical rigidity is practically overcome by the time the cervix is half dilated, and the process can be easily finished by the hand, the same precautions against rupture of the cervix being observed.

Results.—It will be urged against the steel dilator that extensive cervical laceration is caused by its use, but similar results follow manual dilation, and in my experience extensive laceration not infrequently occurs in natural labors where dilatation has been accomplished by the membranes or by the presenting part. My own experience is that the results are not so very different as regards laceration whatever mechanism of dilatation has occurred, although the possibilities of damage are necessarily much greater when a powerful instrument is employed, particularly if undue force is used or improper cases are selected.

In the soft but easily torn cervix which is seen in placenta prævia, the steel dilator may be a source of great danger and is seldom necessary, since it is very rare to find sufficient rigidity in these cases to be a serious obstacle to manual dilatation. In multiparæ with old cervical lacerations the steel dilators must be used with added precautions since comparatively little force is needed to extend an old tear, but while an instrument of the type of the Bossi dilator is so dangerous as to be practically contraindicated in these cases, the careful use of a dilator controlled by the hand is comparatively safe.

It is in the eclamptic patient with a rigid cervix, in whom no sign of labor is present, that the steel dilator finds its greatest usefulness, shortening to a reasonable time, operations which previously required hours and resulted in the death of the patient from shock, with the result that one element of danger in eclampsia, the danger of overwhelming shock from a prolonged operation, has been eliminated.

In a series of twenty cases in which the manual steel dilator was used, I find notes made at the time of the discharge of the patient which show that three patients suffered from extensive cervical tears reaching to the vaginal vault. In the other cases, laceration was noted as slight or moderate in degree. Two of the three cases of excessive laceration were cases of placenta prævia in which my experience has taught me that the steel dilator is seldom a necessary or even advantageous instrument, and always carries a certain risk over manual dilatation. In the third case, complete dilatation was reached in twenty-three minutes from the beginning of the operation, whereas forty minutes is as short a time as is consistent with safety in all but the exceptional case, since it takes at least that time to tire out an average cervical muscle without doing more or less serious damage.

On the other hand, I find in cases of complete placenta prævia dilated manually the same tendency to deep laceration, and I believe that undue haste in the presence of hemorrhage is the principal factor in causing laceration, the cervix in placenta prævia being unusually brittle and non-elastic. Any instrument which increases the tendency to the application of undue force in these cases should be discarded, as more harm is to be apprehended from its use than any benefit which it confers.

The great advantage of the steel dilator over the manual methods of dilatation can best be emphasized by the following case:

Mrs. F., aged 29. Third pregnancy. Confinement expected March 15. On December 25 patient was seized with sharp abdominal pain and slight flowing which was relieved by rest in bed and moderate dose of opium.

On December 29 pain and flowing recurred in moderate degrees, but without elevation of pulse or temperature. About 6 p. m patient had a sudden sharp hemorrhage, losing from

one-half pint to a pint of blood. Pulse jumped to 120 and patient fainted. Patient was seen at once by Dr. Crane, who called a consultation. Examination showed blood clot protruding from cervix, and apparently a placenta prævia. Immediate delivery was advised and accepted. Attempts at manual dilatation persisted in by three physicians for two hours, resulted in cervical dilatation to a degree that two fingers could be inserted through the os with considerable difficulty and no further progress seemed possible. The patient's condition then became such that further ineffective operation was thought inadvisable and opiates and general stimulation were used.

Next morning the patient was sent to the Boston Lying-In Hospital. Examination showed a patient slightly built and showing signs of marked anemia. Pulse, 120, of fair quality. Temperature, 101. On abdominal palpation uterus was found to be distinctly larger than a normal seven months' pregnancy and showed marked irregularity on the right side. No signs of labor were present. The fetal heart could be heard.

The vaginal examination showed the cervix dilated sufficiently to admit two fingers and extremely rigid, resisting attempts at further dilatation. The cervical canal was filled with clots and a low attachment of the placenta, practically a marginal placenta prævia could be made out. By means of the steel dilators the cervix was easily and rapidly dilated and a dead child weighing 2½ pounds extracted. The time consumed in the whole operation was twenty minutes. The placenta was found detached and free in the uterine cavity and removed. Following placenta contraction, the uterus expelled a quantity of blood clots, from one pint to one and a half in amount, and other clots were removed from the right side of the fundus, thus accounting for the irregular enlargement of the uterus and for the marked signs of hemorrhage without sufficient external loss of blood to account for the symptoms. Examination of the cervix showed no fresh tear.

During the early days of her convalescence the patient ran a mildly septic course, being treated by irrigation with sterile salt solution, followed by the instillation of 2 ounces of 5 per cent. alcohol into the uterus, where it was allowed to remain. On the sixth day the temperature reached normal and remained there until the time of discharge on the seventeenth day.

This case illustrates the ease and safety with which cervices too rigid for manual dilatation can be dilated by an efficient steel dilator, and shows the amount of operative shock, as well as the danger of infection, which could have been avoided by its use in the first place.

VAGINAL CESAREAN SECTION.

In spite of the great power which it is possible to apply by means of the steel dilators, an occasional case will be found in which the cervix is excessively rigid, or the seat of cicatricial stenosis so that the degree of force necessary for dilatation or the length of time required for the operation may be such as to render the operation unjustifiable and a more rapid method is indicated. Although I have never yet seen such a case, there are unquestionably cases where a cervical indication exists for either a vaginal or abdominal Cesarean section and the choice of operation must be made in accordance with the other conditions present.

Theoretically I believe that there are certain objections to the vaginal Cesarean section. In the first place it is an operation best adapted to the hospital where there are proper assistants and appliances and is not suited to the out-of-town practitioner's needs, even if he is qualified to perform it. In the second place it requires a degree of surgical knowledge and skill which can not be expected except in the specialist. In the third place I can see possibilities of considerable danger in its performance. I have seen at least one report of injury to the bladder which resulted in a vesicovaginal fistula requiring a secondary operation, not a serious danger with the patient's life at stake, still a danger to be considered. Finally, from my experience with abdominal Cesarean section, I have learned that the uterus splits readily, even when a sufficiently large incision has been made for the extraction of the child, and I can not but believe that the vaginal incision will at times be extended into a rupture of the uterus requiring an abdominal operation for closure, in a patient who has not been prepared for a laparotomy.

Theoretically then I believe that the cervical incision should be reserved for the extremely rare cases in which dilatation is impossible or too dangerous, and in which abdominal Cesarean section is believed to be contraindicated for some reason and that instrumental dilatation, properly performed, offers the best chance of safety to the majority of patients.

MANUAL AND INSTRUMENTAL DILATATION OF THE PREGNANT AND PARTURIENT CERVIX.*

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Most of the graver obstetric operations find their necessity in the difficulty or impossibility of overcoming two barriers to delivery by the natural passages. The first of these is the resistance offered by the bony pelvic inlet and the second the obstruction of the cervix.

Leaving out of consideration for the moment the causes of fetal dystocia, I believe that, broadly speaking, the most important factor in maternal dystocia is in the large proportion of instances of this second barrier to the progress of delivery, namely, the barrier of the cervix.

Unlike the barrier presented by a contracted pelvis, this barrier of the cervix is always present; and although it is true that in physiologic labor it is readily and safely removed by the natural efforts, it is, I firmly believe, equally true that unfortunate results for both mother and child are far oftener the consequence of non-dilatation or unsatisfactory dilatation of the cervix than of obstruction offered by the bony canal. Hence, the importance of the various methods for removing this barrier of the cervix either by incision or stretching, and their appropriate application.

I accept it as proved that the cervical canal of one inch in length, bounded above by the internal and below by the external ring, retains its integrity until toward the end of pregnancy, the internal os remaining closed in most instances.

Toward the end of pregnancy, or at the beginning of labor, the upper portion of the cervical canal begins to expand for the reception of the ovum. This unfolding depends in the last days of pregnancy on the sometimes unnoticed, but often clearly marked intermittent uterine contractions, increasing the intrauterine pressure and the resistance which the uterine walls offer to the increasing growth of the ovum, so that the presenting part of the amniotic sac is forced into the os internum. Hence it is that we usually find an earlier expanding of the internal os in the primigravida, in whom the intrauterine pressure is greater than in the multigravida, and in the latter in overdistension from hydramnios and twins.

The relative cervical changes in primigravidæ and multigravidæ are interesting from a clinical standpoint. Although the intermittent uterine contractions are less frequent in the primigravidæ, the tension of the lower

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

uterine segment is greater. In the multigravidæ the tension in the lower uterine segment is less than in the primigravidæ and, therefore, pressure is not so readily communicated to the margin of the upper orifice and wall of the cervical canal. When it is communicated, dilatation of the entire cervical canal readily follows, while in the primigravida, on the other hand, dilatation of the upper cervical canal first occurs, the more distant lower portion, namely, the external os, remaining unaffected.

So it happens in a primigravida that the upper cervical canal is usually expanded for the reception of the

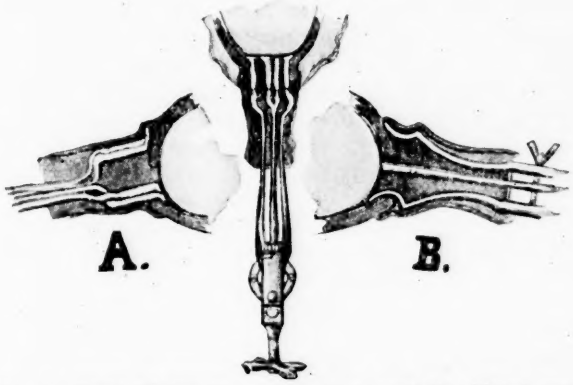

Fig. 1.—Bossi dilator in position in a partially dilated cervix. A. B. shows slipping of the terminals of steel dilators from the ring of cervix when dilatation is nearly completed.

ovum some time before labor, and this is less often the case in the multigravida under ordinary circumstances. In the latter in abnormal instances, as in overdistension from twins and hydramnios, the unfolding up to the upper portion of the cervical canal is most clearly demonstrated and almost complete.

Softening of the cervical connective tissues begins early in pregnancy at the external os and progresses steadily upward, the upper cervical zone being the last

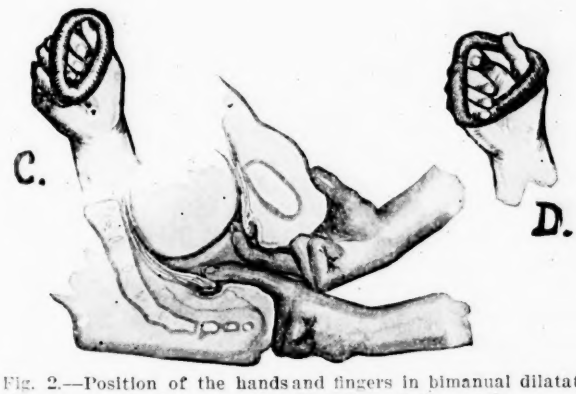

Fig. 2.—Position of the hands and fingers in bimanual dilatation of the cervix. C. D. unimanual dilatation of the cervix.

affected. This softening is the result of the lymphatic and venous stasis caused by pressure from above, and is a serous infiltration in the lymphatic interspaces. The essential connective tissue elements being thus deprived of their cohesive force which originally held them together, offer but little resistance to the progress of dilatation and delivery in the last third of gestation. Thus we see that, while the natural processes of dilating the muscular structures of the cervical sphincter work from above downward, softening of the connective tissue takes place from below upward.

THE BARRIER OF THE CERVIX IN EARLY AND LATE ABORTIONS.

In the first two-thirds of gestation no lower uterine segment forms and very little change in the cervical sphincter is found, with the exception of some softening of the lower portion.

On the occurrence of labor at this time in a primipara the ovum is first arrested by the internal os and, after the resistance of the latter is overcome, passes into the cervical canal which becomes distended and funnel-shaped (cervical abortion). The external os, however,

Fig. 3.—Bimanual dilatation of the cervix. Shows dilatation complete and paralyzing the ring of the os.

in primiparæ, still offers considerable resistance, and the ovum may remain in the cervical canal for a long period. In a multipara, on the other hand, under ordinary normal conditions, the external os offers no resistance, since it has been dilated by previous deliveries, and after its resistance has been overcome the ovum, if entire, is easily and quickly expelled.

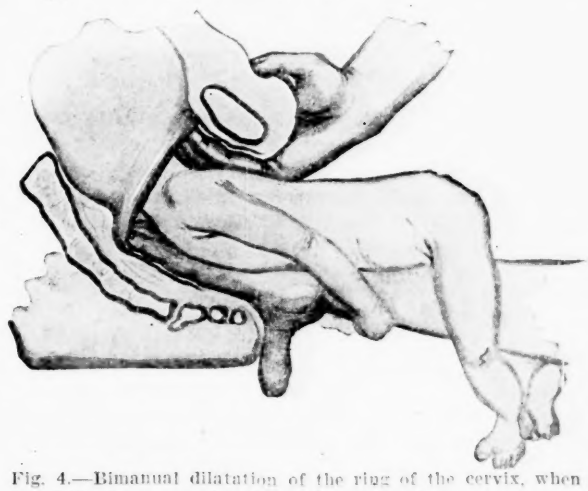

Fig. 4.—Bimanual dilatation of the ring of the cervix, when the body of the fetus occupies the vagina and vulva.

In abnormal rigidity in a multipara from chronic metritis and connective tissue development the internal os offers marked resistance. In such cases, according to Bayer, a lower uterine segment and cervical dilatation process forms as in normal labor at term.

THE BARRIER OF THE CERVIX IN PREMATURE AND FULL-TERM DELIVERY.

Expanding of the upper portion of the cervical sphincter in primigravidæ and dilatation of the whole canal in multigravidæ and the progressive softening from below upward in both take place in the last month

of gestation, often earlier in the multigravidæ, so that every week, every day, as we recede from the preparatory stage and the actual onset of labor itself the difficulties of any method of rapid artificial stretching of the cervical sphincter increase.

Because of so many and varied anatomic conditions of the pregnant and parturient cervix, each and every method of artificial cervical dilatation has its place to meet these conditions. The uterine and cervical tampon, the uterine bougie, graduated hard dilators, branched steel dilators, hydrostatic bags, superficial and deep cervical incisions and vaginal Cesarean section, are all applicable, in appropriate instances, to meet varying indications.

When one hears a sweeping condemnation of this or that method of cervical dilatation, as with steel dilators of the Bossi type, or by vaginal Cesarean section, it is fairly certain that the one making such a statement fails to appreciate the varying cervical conditions and the value of these procedures, or has not had sufficient experience with them. Such a one, with equal justice, might claim that, because he has always used a knife for cutting purposes and found it convenient as far as his experience went he has no use for scissors. Our attitude toward new methods of treatment should be to try them all and adopt the best.

Broadly speaking, the whole cervix can be regarded as a species of sphincter, whose sphincteric action is opposed by the influence of the other muscular layers of the uterus. By the increased intrauterine pressure by the intermittent uterine contractions in the last weeks of gestation in the preparatory stage of labor and the beginning of actual labor, the cervical sphincter is weakened and broken and the supravaginal portion is expanded for the reception of the ovum in primigravidæ and dilated along its whole length in multigravidæ, and finally in labor drawn up into the walls of the lower uterine segment and finally disappears into what has been termed the "region of the internal os." The softening of the cervix progressively increases from below upward in both instances.

With these premises we can make the statement that artificial removal of the barrier of the cervix can be accomplished in three ways, namely: 1, By stimulating the contractions of the uterus and increasing intrauterine pressure by the introduction of foreign bodies within the uterus, as the uterine bougie, the gauze tampon or hydrostatic bags; 2, by overcoming the sphincter action of the cervix with the hand or hands or metal instruments; 3, by incision of the sphincter, as in deep cervical incisions or vaginal Cesarean section.

Clinically, I am accustomed to divide my cases in which either manual or instrumental dilatation of the pregnant or parturient uterus is demanded, into those calling for, first, rapid dilatation, namely, within an hour, and, second, those in which more time is available for the removal of the cervical barrier.

RAPID DILATATION OF THE CERVIX.

To accomplish rapid dilatation, we have at our command to-day incision and mechanical dilatation of the cervix, the former including vaginal Cesarean section and deep cervical incisions. My experience has taught me that after the thirtieth week of gestation mechanical means for the rapid dilatation of the cervix will suffice in most cases and that incision of the cervix for purposes of dilatation is rarely called for.

Previous to the introduction of the Bossi type of dilator I incised a number of cervices by both superficial and deep incisions. Since its introduction I have cut very few cervices. I consider the Bossi dilator a valuable addition to our resources and its use justifiable along the lines in a moment to be suggested. As we recede from the thirtieth week of gestation the number of cervices that can not safely be rapidly dilated by manual and instrumental means increases.

In my experience bimanual stretching of the cervical sphincter for rapid delivery has given the best results. While I only called attention to this method in November, 1896, the hospital records of my cases show that I have been dilating the cervix by the bimanual method in cases of eclampsia, placenta prævia and delayed labor since 1892. I have every confidence in the efficacy and safety of bimanual stretching of the cervical ring as a means of dilatation when carefully and skilfully performed. Further, my experience leads me to advocate strongly the use of the two hands for cervical dilatation along the lines already suggested.

It is a significant fact that in my sixteen years' experience in five maternity hospitals I have yet to meet an interne who, having tried the two methods of cervical dilatation, namely, with one and with two hands, did not finally adopt the method requiring the use of the fingers of both hands, and for the following reasons: 1. The bimanual method is a closer imitation of the natural process than any other method of manual dilatation, being in this respect analogous to the bag of membranes or the hydrostatic bag, because the force used for dilating the cervical ring is directed from above downward (Fig. 2). 2. Far greater force can be brought to bear on the cervical ring, if need be, by the bimanual method than by any other, because the fingers of both hands are brought into play and the stronger flexor muscles of the fingers and hand are the ones made use of. 3. There is no danger of prematurely rupturing the membranes, as there is when the fingers of one hand are passed through the cervix. 4. There is no interference with the original presentation or position, since the finger ends closely hug the lateral uterine wall; this can not be said of any other manual method of dilatation, nor even of hydrostatic bags. 5. The bimanual method is far less fatiguing than any other method, because the strain is distributed in both hands, and the sense of touch of the operator's fingers is unimpaired, as there is no constriction of the hands as there is when one hand is used. 6. The amount of force exerted can be better estimated with two hands than with one; hence the danger of laceration is lessened. 7. In placenta prævia there is less separation of the placenta with the bimanual method than with the fingers of one hand when thrust through the ring of the os (Fig. 2, C and D). 8. The bimanual method can be performed while a part of the fetus, as a leg or after-coming head, already occupies the vagina. This advantage applies to no other method of manual dilatation and is, in my opinion, its greatest recommendation (Fig. 4).

OPERATION.

My method of procedure is as follows:

After the usual preparation of the patient, and placing her in the lithotomy position at the edge of the table, I pass the index finger of the left hand into the os and, hooking the distal phalanx within the internal or external os, as the case may be, I draw the whole cervix forward and a little downward against the posterior pubic wall and fix it there. I then insert the right index finger

along the dorsum of the left, using the latter as a guide (Fig. 2). A sterile towel, drawn tightly over and stitched to the perineum and pinned to the sheet covering the table on either side, will prevent contact of the lower fingers with the anus.

Where much difficulty is experienced in inserting the second finger, I immediately resort to a preliminary dilatation with the Bossi dilator, enough to allow the introducing of the two indices into the cervical canal. This is so much a routine with me now that the Bossi dilator is always boiled as a preparation for delivery of eclamptic and placenta prævia cases at the Manhattan Maternity and my Bellevue service and I am accustomed to carry it with me to such cases seen in consultation. I have failed to find any advantages in the two-bladed dilator of Gau that the Bossi instrument does not possess.

The two index fingers being now introduced, dilatation is secured by them and successive fingers as they are introduced, by pressure in opposite directions, by a kind of eccentric massage, the fingers of opposite hands making gentle and steady pressure downward and outward in opposite directions; first, antero-posteriorly, is exerted being constantly changed so that all portions then laterally and obliquely, the points at which pressure of the cervical ring are subjected to it. After the four fingers of each hand have been introduced, some little time must be spent in producing complete relaxation, effacement and paralysis of the resisting external cervical ring, so that no difficulty shall be encountered from obstruction here during the extraction of the child (Fig. 3).

In the class of cases in which much resistance is encountered by reason of the non-disappearance of the supravaginal cervix and in which time does not permit the preliminary use of hydrostatic bags to excite the uterus to draw up the internal os, I have found an invaluable aid in the metal dilator of Bossi. I find that ten or fifteen minutes' use of this instrument in such cases sets up uterine action and consequent drawing up of the internal os, also causes softening of both rings of the cervix and relaxes them sufficiently to permit of a subsequent safe and rapid manual dilatation (Fig. 1).

I never use the Bossi dilator to complete the effacement of the cervix, as by so doing I believe we run great risk, but only as a preliminary procedure, believing the fingers to be safer and more closely imitative of Nature's method of dilatation and more under the control of the operator (Fig. 1, A and B). The Bossi type of dilator is apt, after partial dilatation is obtained, to slip away from the ring of the cervix and rupture the uterus above or vagina below.

SLOW DILATATION OF THE CERVIX.

For slow cervical dilatation my main reliance is on the hydrostatic bag of the Champetier de Ribes type. It acts by increasing intrauterine pressure and exciting uterine contractions. Occasionally it fails of its purpose, but I have yet to observe an instance in which the introduction of a hydrostatic bag for several hours did not so change the cervix, by causing a drawing up of the internal os and softening of the vaginal portion, as to render a subsequent bimanual dilatation a safe and easy procedure. My experience has taught me that the solid uterine bougie acts in the same way, but to a less extent. In my experience, also, both the hydrostatic bag and the uterine bougie act more promptly and energetically in primiparæ than in multiparæ, probably because of the greater intrauterine pressure in the former. Because of this action of the hydrostatic bag and bougie of exciting the changes in the cervix favorably for a subsequent manual or instrumental dilatation I am accustomed to employ them often, as preparatory means, when necessary, and then dilate the cervix, the patient being anesthetized, bimanually, and either deliver artificially or leave the case for spontaneous expulsion.

50 East Thirty-fourth Street.

DISCUSSION

ON PAPERS OF DRS. EDGAR AND NEWELL.

DR. PHILANDER HARRIS, Paterson, N. J., stated that every obstetrician should be capable of manually dilating the cervix by one method or another in the later months of pregnancy. The method which he has employed necessitates the introduction of the entire hand into the vagina. If the vagina is too small to admit the hand, or if the child is so engaged in the pelvis that there is not sufficient room in the vagina for the hand the method cannot be used; furthermore the method can not be employed unless the cervix admits the index finger to the metacarpophalangeal knuckle, or can be dilated so as to thus admit the index finger. When this degree of dilatation has been effected in any manner the tips of the first finger and thumb of a strong hand should be capable of exerting enough force to carry forth the dilatation. Probably few hands are strong enough to exert sufficient strain to tear the cervix until the cervical ring is enlarged sufficiently to admit three fingers and the thumb. As the cervical ring enlarges, less force is required to effect dilatation.

In the later stages of dilatation, he said, when four fingers and the thumb are introduceable, a strong hand is capable of lacerating most uteri. Many uteri have been uselessly torn by the hand in the finishing stages of dilatation. Dr. Harris has unintentionally effected such lacerations. He ordinarily dilates the cervix to a circumference of eleven or twelve inches, after which, if there be no osseous obstruction, and the anesthetic having been withdrawn, the child is generally delivered in a very few minutes. Dr. Harris stated that every one should know some good method of dilating the cervix with the fingers and hand. Whatever manual method may be used, the task is often very fatiguing and the operator may at times greatly need the aid of an assistant to carry on the dilatation while resting his hands. Dr. Harris said that the instrument which he devised for dilating the cervix for parturient purposes, works admirably, and while it has qualities not possessed by any other dilator, it is open to an objection which must attach to all dilators, and that is, the difficulty of knowing whether the cervical ring embraces the concavities of its terminals. He has had two embarrassments, neither of which were in any way of a serious character, in the use of his own dilator, although the concavities of its terminals are deeper and broader than those of other dilators. He asked Dr. Edgar to state in what particulars he considers his (Harris') dilator inferior to the dilator of Bossi.

As to vaginal Cesarean section, he said that there are certain conditions which undoubtedly indicate its use. One of these conditions is cancer of the cervix, the other is where there is an extensive deposit of white fibrous tissue, resulting from previous operations or traumatism, and in which the uterus will be found practicably undilatable. Such uteri can be torn, but they can not be dilated sufficiently, and therefore constitute conditions calling for the employment of vaginal Cesarean section. There are other conditions requiring resort to vaginal section, but they form a small and possibly exceptional series of cases. Dr. Harris does not feel that this operation should supplant dilatation, which is generally so easily possible and certain in result. The non-gravid cervix and the cervix which has not recently been gravid, possess but little of the quality of dilatation, while the uterus which is gravid or has recently been gravid, is dilatable.

When pregnancy occurs it effects certain changes in the musculature of the cervix. It locks the cervical gateway of the parturient canal, but while it thus guards the threshold, it prepares the gateway to open, or to be opened, widely enough to permit escape of the fetal products when necessary. Ordi-

narily, if Nature does not open the gateway, the physician may, when he thinks the patient's interests are bettter subserved, safely and surely open the cervix by exerting therein a sufficient and continued strain either with the fingers and hand, or by some well adapted instrument.

Dr. G. M. Boyd, Philadelphia, said that, although in his opinion the instrumental methods of dilatation and the various dilators are useful to a degree, it would be a step backward if too much stress is laid on instrumental methods. Manual dilatation is serving him so satisfactorily that he wished to defend that method of slow or rapid delivery. All of the instruments described will be of service to dilate the cervix to the size of a half dollar. The cervix will be capable of stretching to that extent, and beyond that it will tear in many cases under the use of instruments or hands. He would rather feel a tear than have an instrument make it. Incisions in the cervix have sometimes been necessary in his hands, though manual dilatation has been satisfactory. In almost all cases it will finally be necessary to accomplish the delivery by manual dilatation. The instruments, therefore, can only begin the operation. Manual dilatation requires time to accomplish delivery, but it is time judiciously spent.

Dr. Charles Stoltz, South Bend, Ind., had some experience with manual dilatation and considers it a most trying ordeal on the operator as well as on the patient. He finds it a very exhausting procedure. Recently he had a primipara, 29 years old, whom he delivered of a very large monstrosity, in which the entire calvarium was absent. The head, the presenting part, was therefore, not of dilating shape, and besides the axis of the child was not in harmony with the axis of the birth canal, making artificial dilatation of the cervix necessary. After fifteen hours of ineffectual pains, he proceeded to do bi-manual dilatation, preliminary to a podalic version. He worked all night on that cervix and never before nor since has he had such a perineal tear. He felt chagrined about it because he had affirmed such results inexcusable.

He has used the Bossi dilator four times with the best results for complete dilatation of the cervix. Once, four weeks after term, twenty-four hours of ineffectual pains, in a mal-presentation; once, to induce labor in a case of profound toxemia of pregnancy at term; and twice to terminate late abortions, where, in each case, the fetus had been dead for some time in an inert uterus. His method of using the dilator is as follows: Insert it, put the cervix on the stretch with the screw, then pass a finger or fingers in between the blades, using the knuckle on the limbs of the instrument as a fulcrum, thus doing the dilating with the fingers just as in manual dilatation. He stretches every segment of the cervix with his fingers, using the screw just merely to take up the slack, then proceeds as before, time after time, until complete dilatation is made. A sterile gauze sponge may be wrapped around the back of the hand to modify pressure on the knuckle. By adopting this plan dilatation can be effected rapidly and effectually.

Dr. Chas. J. Hastings, Toronto, Canada, thinks that there is not so much dependent on the method of dilatation, whether it is instrumental or manual, as on the person who dilates. One can readily understand that the method one is most familiar with seems the best, and no doubt it is the best to him. In Dr. Hastings' opinion, with an instrument having a true pelvic curve, in the hands of a careful operator who will make, say a quarter turn to the minute, dilatation should be accomplished with perfect safety. In regard to manual dilatation, he said that in his experience the hand, unless it is very small, in the cramped position it has to occupy, soon becomes powerless. He does not see why manual dilatation should endanger the patient by infection. No one should operate without gloves. It is extremely important, however, to emphasize the danger of these instruments in unskilled hands. The use of the obstetric forceps has been followed by disastrous results in the hands of some, while it is absolutely safe in the hands of others. Regarding choice of cases, this, he said, is practically limited to eclampsia and concealed accidental hemorrhage. Dilatation in placenta prævia must be extremely guarded and limited, because of the enormously enlarged vessels at the placental site and the friable conditions of the tissues, which readily produce uncontrollable hemorrhage.

Dr. Charles E. Paddock, Chicago, agreed with Dr. Hastings. He recalled the advice given some years ago in a prominent text-book on obstetrics, to leave the obstetric forceps at home, to be sent for when needed; that the temptation was too great, and that the instrument might be used without the necessary indications. He believes this advice applies to any of the metal instruments used for the dilation of the cervix. He has found but one case where he thought such an instrument might be indicated. The instrument shown by Dr. Newell appealed to him as one which could be used with the greatest safety and efficiency. As to lubricants, he has found the natural secretions sufficient, without resorting to other means.

Prof. A. Dührssen, Berlin, Germany, said that Olshausen had with the use of the Bossi dilator in eclampsia a mortality of 37 per cent., and Bumm, of Berlin, had in 70 cases of eclampsia, with the use of vaginal Cesarean section, only two deaths. Therefore, he repudiates the Bossi method entirely. In cases of closed cervix it is dangerous, and the dilatation of the supravaginal part of the cervix is unnecessary, and, furthermore, delivery can be performed by deep cervical incision or by vaginal Cesarean section. The Bossi method invariably leads to tears. Cases are reported where after the use of the Bossi, the patient ruptured her uterus in a subsequent labor. Dr. Dührssen was pleased to hear Dr. Harris say that there are cases in which no method of manual dilatation is possible. Manual dilatation is also impossible in cases of rigid cervix. There is a lack of elastic fibers in the cervix, since these cases can not be dilated, and the most dangerous tears usually follow attempts at dilatation. In these cases it is only possible to dilate through incision. This operation is now no longer confined to hospitals. If there is a skilful specialist he can do it just as well at home. It is necessary to be a skilful operator to perform a proper vaginal Cesarean section. Dr. Newell said that it is possible for the incision in vaginal Cesarean section to tear further; but this does not occur if the incision is properly made.

Prof. A. von Rosthorn, Heidelberg, Germany, said that the obstetricians of Germany are divided into two groups; one emphasizes incision, the other recommends dilatation. The Germans are more in favor of the incision method, for then one knows what he is doing, and it is surgical. All these things must be done carefully. When von Rosthorn did his first incision of the cervix, he was astonished how quickly it was done and how simple it was. He made the incision in the anterior wall only to the internal os, and was able to remove a small child easily with the forceps. The operation lasted only a few moments. He prefers the incision method, especially where the work must be done quickly. When there is time, the balloon method can be used.

Dr. W. E. Boardman, Boston, favors manual dilatation, although he admits that in the hands of a skilful operator, instruments can be used with comparative safety. But speaking not only to the skilful surgeon, but also for the benefit of the general practitioner, he objects to putting into his hands an instrument capable of doing so much harm. No instrument can have the intelligence of the human hand. The aseptic and antiseptic methods of the present day give assurance to the operator, so that the use of the instrument may not be attended with many of the dangers that formerly accompanied it. With gloves perfect asepsis exists.

Dr. J. H. Carstens, Detroit, said that Dührssen's operation is not a difficult one. After separating the bladder from the uterus, an incision of about two inches is made, without opening the peritoneum. Through this opening a fetus can be delivered in a few moments. By keeping near the median line of the uterus, on account of the smallness of the vessels there, there will be very little hemorrhage, and delivery can be affected by forceps or version in two or three minutes. The whole operation can be done in six or seven minutes. When it is considered that this operation is only necessary in uremic convulsions, the operation of Dührssen is the only one of choice.

Dr. R. S. Yarros, Chicago, said that in most multiparæ the Harris method serves well. There are certain cases, especially in old primiparæ, in which the method fails entirely. A number of years ago Dr. Yarros had a primipara suffering from eclampsia, in which the Harris method was absolutely useless.

She feels quite sure that if she had performed the Dührssen operation the patient might have been saved. In two recent cases the Dührssen incision was used with very excellent results. She said that it is a simple procedure, and will be found extremely useful in a certain number of cases.

DR. J. C. EDGAR, New York, has yet to see a dilator that will not tend to slip after two-thirds dilatation had been gained. For fear that it was a personal equation, he turned the Bossi and Harris dilators over to his assistant in one case and asked him to complete a dilatation, and he had the same experience that Dr. Edgar had had. The dilator of Newell, he said, is a radical advance on all the dilators, and the point is that the hand is really doing all the dilating. One can not estimate the dilatation with an instrument; the hands must be used. Dr. Edgar's position as regards dilatation of the cervix is that there are cervices that will resist both manual and instrumental dilatation. Instances where rapid dilatation is required, in which the cervix will resist a combined operation, are very exceptional. The incision of the cervix after Dührssen is valuable, he said, but when the statement is made that the incision will not extend, one must be careful how that statement is made. He has made several deep incisions, and has a photograph of a uterus of one case where it could be demonstrated that four incisions were made, yet on the left side one incision extended up into the broad ligament. In making the original incision one can not tell exactly how much room is necessary for the extraction of the after-coming head.

DR. F. S. NEWELL, Boston, agreed with Dr. Edgar in what he said of the slipping of the terminals. His idea of the best use of the dilator is to abolish the cervical rigidity. More babies have been sacrificed by the hands of the operator being too tired to complete the operation than anything else, and he thinks it very important for the operator to save his hands for a difficult extraction. The vaginal Cesarean section, he said, is a most excellent procedure, but he does not think it necessary in the great majority of cases. The question of obstetrics being done by the general practitioner is worth consideration, but the earlier it is recognized that obstetrics is a surgical disease, the better it will be for all.

THE MEDICAL TREATMENT OF CANCER.*

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For several years I have made a special study of cases of cancer, for the purpose of endeavoring to discover some of the causes, and thus to throw light on the proper method of treatment. I have reached certain well-defined conclusions in my own mind concerning this most important subject.

As a preliminary to the question of treatment it will be necessary here to epitomize briefly my opinions concerning the causes of cancer.

The first and probably the most powerful predisposing cause of cancer is senility, or old age, of the tissues and organs of the body. An apparently formidable objection will at once be made to the above statement by citing the well-known fact that cancer is found in young persons, and is sometimes (though rarely) congenital. While this is perfectly true, yet it should be remembered that senility is only a comparative term. Many persons are practically as old in their tissues at twenty or thirty years of age as others are at sixty. The real test of old age is not the number of years a person has lived, but the retrograde metamorphosis and degradation which has taken place in the various parts of the body.

When we see the arcus senilis in the eye of a patient, or note that he is suffering from fatty, calcareous, arteriosclerotic or other forms of degeneration of the organs of the body, we at once know that this person practically belongs to the class of the aged, and this important fact must always be borne in mind in the treatment of such a patient. This same degeneration of the tissues is often inherited, and is probably the reason why the offspring of syphilities and tuberculous patients, and drunkards often suffer from cancer at an early age. These children, there is every reason to believe, do not inherit the cancer neoplasm as such, but the resisting power of their tissues is so lessened as to form a suitable soil for its growth and propagation.

The vast majority of cases of cancer then occur in persons whose tissues are undergoing degeneration either from advancing age or senile changes. In women about the time of the menopause and in men of a similar age, when the duties and labors of life begin to seem to be a heavier burden than they were in youth, this disease becomes more prevalent.

Another curious fact is the interesting prevalence of cancer during the last thirty years. Dr. Roswell Park[1] says that if the present increase of cancer in the United States continues from 1899 to 1909 there will be more deaths from cancer than from consumption, smallpox and typhoid fever combined.

Cancer is also increasing in England. In 1898 there were 25,196 cases of cancer reported, or 902 per million of the total population. The male rate was 19.6 and the female rate was 10 per cent. greater than the average of the past ten years.[2] In Germany the same fact is noted. In 1898 there was twice as many cases of cancer relatively to the total population as there were in 1879.[3]

GEOGRAPHICAL DISTRIBUTION OF CANCER.

This relative increase in the number of cases of cancer is found to exist at present in all civilized countries, and it should be noted that this is coincident with the great improvements in the diet and hygiene of the population of our great cities, as compared to their condition during past generations.

I do not wish, however, to be misunderstood, or to assert that the increase of cancer is due to the improved hygiene and diet of the present generation, but I believe it to be due to the over-consumption of a particular kind of food about which I will speak more in detail hereafter.

Cancer *per se* is not a disease which prevails extensively in hot climates. Especially is it rare among those races inhabiting hot climates who live almost entirely or wholly on vegetable foods. It is comparatively rare in tropical countries. In Borneo it is unknown. Dr. A. B. Dahlgetty says that he has never seen a case of malignant disease of the mamma in a native of Hindostan. He wonders whether the constant presence of malaria in these countries has anything to do with it. He also calls attention to the want of pressure on the breasts of the Hindoo women by their thin and light clothing, and in the second place to their habit of suckling their children until the breasts are literally sucked dry. Such a gland would appear less likely to undergo perverted action than a gland arrested while its function is still in full force.

The inhabitants of certain parts of China, Burmah and India suffer comparatively little from cancer, and in certain localities in these countries it is very rare. What is the cause of this comparative exemption? The facts would seem certainly to warrant the assertion that a diet of vegetable food is inimical to the development of cancer.

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* Read before the American Therapeutic Society, May 5, 1906.

1. Medical News, April 1, 1899, p. 399.
2. Philadelphia Med. Jour., April 21, 1900, p. 887.
3. Medical Record, May 17, 1902, p. 776.

INFLUENCE OF ALCOHOL.

The second predisposing cause of cancer that I would mention is the habitual use of the various forms of alcohol as an article of diet. No one can deny the enormous amount of evil that is done to the individual who partakes of alcohol, and also to the community as a whole from its use as an intoxicant. But there is a more insidious and more dangerous effect on the tissues of the body from smaller quantities of alcoholic drinks (when taken regularly) than is generally recognized. The dilute forms of alcohol enter into the blood and thence circulate through every tissue and organ of the body.

What is the effect of this? The alcohol, by powerful affinity for the water of the tissues, dehydrates and prematurely hardens them; not only this, but alcohol is a retarder of waste in the body. In other words, it diminishes the metamorphosis of tissue, it hinders the separation from the tissues of the body of those effete and waste products which should be eliminated. These used-up and waste matters are retained in the body, and tissue hardening and degeneration of organs are the results. If we may use the simile, the fuel is ready for a spark to kindle it, and if we have a local irritation, an injury or necrosis of the living tissue, a malignant or other neoplasm may result.

These remarks do not apply to the drunkard; we all know what his fate will be. Many persons live daily under the influence and die from the effects of alcoholic drinks who are never suspected during their lives (except by their physicians) to have used them. The daily use at meals of various "bitters," etc., is essentially nothing more than a thinly disguised tippling under the form of medication, and produces dire effects in the course of time, especially when at the same time little or no bodily exercise is taken.

INFLUENCE OF DIET.

The third and most important predisposing cause of all we believe to be the consumption of too much meat and nitrogenized food. If we consider the uses of meat as an article of diet, we will speedily see that it is taken to supply the waste of the muscles and other nitrogenous tissues of the body. In persons living inactive lives the consumption of bodily tissues is at a minimum, and hence they need very little meat or nitrogenous food. If these same persons are habitual consumers of alcoholic drinks, even in small quantities, their power of assimilating meat is still further decreased.

In fact, as persons advance toward the close of life their needs for food, and especially for the nitrogenous parts of it, are lessened, and the amount of food given to such persons should be diminished.

Sir Henry Thompson, who is now past 83, says that in old age we ought to diminish the amount of food taken; he further says that half of our ills in old age are due to overfeeding. He also advises and has practiced in his own person the total giving-up in later years the use of alcoholic drinks.[4] In persons who consume large amounts of nitrogenous food, and even when they are habitual users of alcohol, the frequency of cancer is greatly diminished when their avocations require them to take a great deal of exercise, or when they perform hard manual labor. In 50 years of continuous practice I have seen very few cases of cancer (with the exception of lip or tobacco cancer) occurring among men who labor in the open air. The reason, no doubt, is that the waste materials produced in the body are burnt up by hard manual exercise.

Whatever theory we may adopt as to the causation of cancer, there are two facts of history that seem to be now generally admitted. The first of these is that it is probably always local in its early stages, and the second is that its origin is due to some injury or local irritation of the parts affected.

SUMMARY OF CAUSES.

Finally, I wish to summarize, by giving the following facts, which seem to me to express the history of the causation of cancer:

1. Cancer is a disease of senility or decay of the tissues, or at least occurs at the time when the retrograde metamorphosis of the tissues is taking place.

2. Cancer is comparatively rare in hot climates, and especially where the diet of the inhabitants is composed chiefly of rice, or other starchy food.

3. Cancer is very prevalent at the present time wherever animal food is largely consumed; the number of cases of cancer has been found to increase in proportion to the increase in the consumption of nitrogenous or animal foods.

4. The theory of Dr. Gaylord that cancer is caused by a protozoon or animal micro-organism seems to be disproved by later investigations, and the probability is that cancer is simply erring epithelium which has taken an abnormal growth and development.[5]

TREATMENT.

Believing, as we do, that cancer is simply an error of cell development depending on the retention of waste matter in the system, the treatment of cases of cancer may be divided into two classes, namely, the preventive and curative.

The preventive treatment of cancer has been largely ignored by medical men, and yet if the above views of the causes of cancer are correct, it is of overwhelming importance.

Cases of cancer then should be diagnosed and treated at the earliest possible moment.

The most potent cause of the failure of our treatment of cancer is the neglect of the patient to apply to the physician for treatment until the disease has become so far advanced as to render the case hopeless. How often do women from mistaken feelings of delicacy hide from their physicians the growth in the breast, or the sanious or bloody discharge from the uterus, which are the warnings of the danger to the health and life of the patient.

There are at least two distinct types or classes of patients suffering from cancer who require and can be benefited by our medical counsel.

These varieties of cancer are radically different in their causation and require very different treatment.

The first is the anemic variety. These patients come to the physician weak, pale and bloodless and often suffering from chronic leucorrhea or other uterine disorders.

What will the physician do with such patients as these?

He will, of course, give them iron in large and rapidly increasing doses, give them, in fact, as much iron in the form of Vallet's mass (ferrous carbonate) tincture of the chlorid of iron or Blaud's pills as their stomach will assimilate.

He will examine carefully the condition of the reproductive organs, and so far as possible will correct what-

4. THE JOURNAL A. M. A., Nov. 23, 1901, p. 1402.

5. For further proof of this see article published in the Jour. of Med. Research, Boston, April, 1902.

ever there is amiss. If he succeeds in bringing back to the cheek the bloom of health by his treatment, he will eliminate to a great extent the possible danger from cancer. The diet should consist of the various forms of digestible and unstimulating vegetable foods. Alcohol, as a food, should be entirely eliminated, and meats and other nitrogenous foods should be reduced to a minimum amount.

Careful attention should be given to the regular action of the bowels, which should take place at least once each day. The urinary secretion should be examined and proper means adopted to correct any disorder or diseased condition of the kidneys.

To epitomize the treatment of the cases of cancer, it should simply be the effort of physicians to endeavor to bring their cancerous patients into the highest condition of personal health and excellence of hygiene.

The second and very different type of cancer we would like to name the plethoric type.

These women come to the physician often suffering very little except from a slight sanious discharge, which seems to them so trivial that it is hard for them to think that they require any medical attention. They are generally indolent, stout, well-nourished and consume an abundance of food. In fact, they consume too much animal food. As they consume more food than the body needs, the waste nitrogenous matter accumulates in the system and they suffer accordingly. Suffering, as they do, from an over-plus of nourishment, they require purgatives, starvation and enforced exercise.

These young women, when they first appear in the rôle of patients, think very lightly of their symptoms, but finally to their horror, the fatal diagnosis of cancer is made and they are rudely awakened from their dream of security.

CONCLUSION.

Finally, I wish to state, that it is perfectly astonishing and lamentable to see the apparent helplessness of most of the members of our profession, when confronted with the cases of cancer.

Generally, no attempt is made by the physicians to treat these patients by medication, or to improve their hygiene, and the whole treatment seems to be confined to the knife, the *x*-rays, or some form of electricity.

Valuable as these agents are in the treatment of cases of cancer, yet it is my firm belief that our success in these cases would be far greater, if we would combine with them appropriate medical treatment. Each case must be studied individually and treated accordingly.

ROENTGENIZATION IN THE TREATMENT OF CANCER.

WITH AN EXHIBITION OF CASES IN WHICH THE EVIDENCES OF MALIGNANT DISEASE HAVE DISAPPEARED UNDER ROENTGEN RADIATION.*

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One of the burning questions before the medical profession to-day is "How shall we treat our cancer cases?" The first thought that responds is "With ablative surgery;" the second brings before us the disheartening proportion of hopeless recurrences that follows such management and which varies from 60 to 80 per cent. in different hospitals; the third invokes the Roentgen ray; the fourth, destruction of the affected tissues by caustic pastes; and the fifth, destructive sterilization of such tissues by massive mercuric cataphoresis.

Of the last-mentioned, not enough is generally known as yet to render possible the formation of reliable conclusions, but the results obtained by the father of this method, Dr. G. B. Massey, Philadelphia, and by a few others, are such as to give ground for the belief that it is destined to play a not unimportant part in the future management of malignant disease. Caustic pastes are rationally applicable only to superficial processes, and failures and recurrences are by no means uncommon. This narrows down the choice of procedures in the vast majority of these cases to employment of the knife or the Roentgen ray, or a combination of both.

The possibilities and limitations of ablative surgery in cancer have been pretty thoroughly determined and are very generally recognized and admitted; those of the Roentgen ray are fairly well understood and generally admitted among properly qualified Roentgenotherapeutists, but the rest of the profession are very much in the dark as regards this agent and it is of the utmost importance to sufferers from this disease that knowledge of the subject should be widely disseminated.

To attempt such dissemination by word of mouth alone, however, involves such a strain on the credulity of those not familiar with the subject that I shall precede my statements to-day by an ocular demonstration of the results which have been attained on a few patients who have undergone Roentgenization for cancer during the past four years. Results speak for themselves, and one undeniably positive result speaks louder and more significantly than a dozen negative ones.

CASES.

CASE 1.—Patient was a farmer, aged 55. Several members of his family had had cancer.

History.—About 8 years ago he first noticed a small scab on the side of his nose opposite the inner canthus. It increased in size and ulcerated. Various remedies had no effect on it and when he first consulted me, Feb. 12, 1903, it was three-eighths of an inch in diameter, deeply ulcerated with raised, indurated edges, and discharging profusely.

Treatment.—From this time until April 4, a period of two months, he received 18 Roentgen-ray applications with complete healing as a result. There has been no recurrence and no treatment of any kind applied to the part since. The cosmetic result is perfect.

CASE 2.—A man, aged 66, farmer by occupation, whose mother, aunt, and one sister suffered from cancer.

History.—About 5½ years ago he noticed a small brown spot on his left temple which was accompanied by itching, gradually grew larger and finally ulcerated. He consulted a physician, who recommended the use of a caustic plaster, the application of which was not followed by any beneficial result. The lesion continued to increase in size and the pain in severity, and he finally consulted a surgeon who told him that the case was inoperable.

Treatment.—He consulted me first on April 29, 1902, about a year and a half after having first noticed the growth; it was then the size of a silver twenty-five-cent piece with raised, indurated edges. From this date to June 30, a period of two months, he was Roentgenized 20 times with complete disappearance of the lesion as a result. This was four years ago, lacking one month. There has been no recurrence and he has had no treatment of any sort since. The cosmetic effect is irreproachable.

CASE 3.—A man, aged 60, painter by occupation, with no history of cancer in his family.

History.—About 10 years ago he noticed an itching mole on the right side of his nose which broke down and increased in size for 3 months, at which time he applied a caustic plaster

* Read with exhibition of patients at the one hundred and fourteenth annual convention of the Connecticut Medical Society at New Haven, Conn., May 24, 1906.

which did not cause it to heal. He then went to the New York Cancer Hospital where the growth was removed surgically. It shortly recurred and increased in size until at the time of his consultation with me it was the size of a twenty-five-cent piece, discharging profusely, and deeply excavated with raised, indurated edges. The accompanying illustration is from a photograph taken at that time, but it does not show the depth of the ulceration, as, through a misunderstanding, the photograph was taken when the lesion was covered with a scab.

Treatment.—He received his first Roentgen treatment March 10, 1903, and during the next 4 weeks was Roentgenized 8 times. During this period the only change observable was that the scab formed more rapidly than before, there was slight lessening of discharge and slight redness of the healthy tissue about the lesion. At this time he was forced to discontinue treatment by an attack of acute rheumatism which kept him at home for 6 weeks. He then called on me again but the lesion had entirely healed during this interval and has never recurred or been treated in any way since. The cosmetic result is all that could be desired, the excavated area having filled out to the level of the surrounding parts so that scarcely any depression even is visible.

A peculiarly interesting feature about this case is the striking way in which it exemplifies the cumulative action of the ray. Almost no change of a reparative nature was observable at the time he received his last application, but during the following 6 weeks the transformation, resulting from the treatment, developed rapidly. These three patients have been well and free from recurrence between three and four years.

In cases of mammary cancer it is my belief that the best interests of the majority of such patients demand immediate, radical extirpation, to be followed, in every case, by Roentgenization after the wound has healed. It is but fair to state, however, that some operators, with greater experience in mammary cancer than myself, regard Roentgenization, at least in primary, localized cases, with more confidence than the knife, either alone or in conjunction with the ray. Their results are such as to render the point a justly debatable one, and positively determinable only by future investigation.

The last case to which I desire to call attention was reported in full by me to the Electrotherapeutical Section of the International Electrical Congress at St. Louis, in September, 1904, and constitutes, so far as I have been able to ascertain, the most remarkable exemplification of the curative power which the Roentgen ray exercises over malignant disease, thus far observed. Certainly no case so striking has been reported.

CASE 4.—A school-teacher, aged 39, on whom hysterectomy and ovariotomy were done 8 years ago for what was supposed to be a fibroid tumor of the uterus; no microscopic examination was made.

History.—About 2½ years after this operation she noticed a hard tumor in the lower abdominal wall in the region of the cicatrix. There was no pain and no discomfort but rapid growth.

She consulted Dr. Maurice H. Richardson, of Boston, who referred her to Dr. W. B. Coley of New York, for treatment by the erysipelas toxins. During the next 10 months she was treated with the toxins which caused the growth to decrease in size during the earlier part of this period, but they then lost their power and at the end of this time, in January, 1902, when she was referred to me by Dr. C. A. Bevan of West Haven, the mass measured 10 inches from side to side at the level of the anterior superior spines of the ilia, 8 inches vertically in the median line, and about 5 inches antero-posteriorly in the median line. Microscopic examination of sections removed from the tumor while she was under Dr. Coley's care demonstrated it to be a fibrosarcoma and the mass was rapidly increasing in size. The patient was losing flesh, markedly cachectic, very weak, and complained bitterly of pressure symptoms.

Treatment.—Roentgenization was begun Jan. 28, 1902, and during the next 4 months she received 46 applications. Her general condition commenced to improve at once but the tumor itself had increased somewhat on the right side, but decreased slightly on the left side; on the whole, the tumor was slightly larger at this time than it had been when we started, and the only feature about the case that encouraged me to continue the treatment was the marked improvement in her general condition.

She then went to her home in Massachusetts for a short visit and when she returned a decrease in the size of the tumor of about 20 per cent. was noticed and made it necessary for her to shorten her waist bands and the fronts of her skirts to keep them from dragging on the ground.

From June 17 to September 3, a period of 2½ months, she received 31 Roentgenizations. Her general health continued to improve and the tumor steadily decreased in size and at the end of this period she resumed her occupation of teaching school, which had been interrupted for about a year and a half.

To make a long story short, the whole treatment of this case extended over a total period of two years and three months, during which time she received 136 applications of the Roentgen ray, more than half of which were given during the first 8 months. She received her last Roentgenization May 20, 1904, at which time no trace of the tumor was discoverable, nor had it been, according to the testimony of her family physician, for several weeks previously. The fact of its disappearance at this time was confirmed by examination by Dr. C. A. Bevan, West Haven, and in July by Dr. W. B. Coley, New York, so that this patient has been perfectly well without any evidence of recurrence for more than two years. At the present time she weighs more than she has ever weighed in her life before, is apparently perfectly well in every way, and has taught school uninterruptedly since September, 1902.

BENEFITS OF ROENTGENOTHERAPY.

These cases justify the bald statement that cancerous processes are amenable to Roentgenotherapy, whether superficially or deeply located, and that it is capable of accomplishing beneficial results in cases of so severe a type as to present absolutely no hope even of relief under any other management. It must not be understood, however, that all cases of malignant disease will respond happily or with equal readiness, even when the highest degree of technical skill and the dictates of the ripest experience are invoked in the administration. Individual idiosyncrasy, as regards protoplasmic vitality and the strength of the tendency toward the normal development of cell types constitutionally inherent in different patients, enters the problem with great force. In some persons cell vitality is at so low an ebb that but little disturbance is required to produce a widespread aberration from the normal cell types; in others it is so pronounced that very large degrees of such irritation as usually induces malignant cell growth, are undergone with impunity. These same principles apply as regards the amount of corrective influence required to restore normal conditions in any individual case. But the cardinal fact that the beneficent power is inherent in the ray remains demonstrated and it is our future function to ascertain, if possible, gain control of those extraneous factors and conditions which introduce the element of uncertainty into the treatment of the individual case. Roentgenization appears, then, to be destined for a prominent rôle in the therapy of cancer.

ROENTGENOTHERAPY AND SURGERY.

The next thing to be ascertained, viz., definition of that rôle, at once brings up for consideration the question, "Shall the ray be relied on alone, to the exclusion of the knife, or shall it be applied in conjunction therewith, and if so, how?"

As regards the first part of the question, clinical ex-

perience has shown that it is justifiable, and usually preferable in judiciously selected cases, to rely on Roentgenization to the exclusion of the knife in cases of superficial epitheliomata involving only the external skin. The proportion of successful results is just as large (some operators claim that it is larger) as that attainable with the knife or caustic pastes, the cure is just as radical, and the cosmetic results are much better. An additional advantage is that if recurrence takes place it is usually permanently amenable to a further course of radiation, whereby the extensive removal of tissue is avoided. I will say, in passing, that malignant processes involving mucous membranes do not respond as kindly to Roentgenization as do those which are confined to the external skin. In inoperable cases, wherever situated, Roentgenization must of necessity be relied on to the exclusion of the knife. That it merits consideration in even the most desperate of these, however, is demonstrated by the abdominal case already described.

As regards the second part of the question, clinical experience has shown that when the growth is deeply located or large in size, a much larger proportion of satisfactory results can be obtained by combining the knife and the ray than by relying on either alone. The logic of this proposition is as follows: When a large mass of malignant tissue disappears under Roentgenization, its disappearance is usually accompanied by a variable degree of general systemic toxemia which has been known to be severe enough to kill the patient of itself, and which is always liable to impair general or local metabolism sufficiently to interfere greatly with, and sometimes entirely to defeat, the restoration of normal conditions. Its removal by the knife, *en masse*, eliminates this danger. 2. When the disease process is deeply located, the intensity of the influence which it is possible to exert on the lesion, is so lessened by the passage of the ray through the overlying tissues as seriously to impair its remedial effect. Removal of the lesion by the knife confines the work demanded of the ray to the destruction of microscopic, outlying foci of malignancy, whereby the probability of a favorable outcome is greatly enhanced.

Whether or not a cutting operation for cancer should be preceded by Roentgenization is still a mooted point. In its favor is the probability that limitation of the process can be effected through inhibition of the growth of malignant cells at its periphery, thereby increasing the probability that complete removal can be attained. On the other hand, grave impairment of the reparative functions of parts thus treated has been noted, and the loss of time involved in delaying the operation may at times be a serious matter. There is so little unimpeachable evidence that well-applied Roentgenization has ever been instrumental in actively disseminating a malignant process, and so much in opposition to this theory, that this part of the subject is hardly considered to merit discussion among present-day Roentgenotherapeutists and we can dismiss the subject without further mention. As regards pre-operative radiation, therefore, the conditions surrounding each individual case must determine its management.

Roentgen operators are unanimous, however, in the belief that every ablation for cancer should be immediately followed by Roentgenization, as a routine measure, which belief is based on the following:

1. A large proportion of recurrent malignant growths does not respond kindly to Roentgenization, perhaps because of the increased malignancy with which operative interference seems to imbue some cancers, notably sarcomas.

2. If Roentgenization is delayed until recurrence is manifest, the process may then have become so widely disseminated as to preclude the possibility of benefit from radiation.

3. If the affected area is radiated immediately after radical extirpation of the lesion, the degree of remedial (destructive?) influence demanded of the ray will be limited to such as will be necessary for the elimination of microscopic foci of malignancy, whereas if recurrence is awaited, the remedial influence required will be much greater because the lesions will be much larger and better developed, and the degree of increase demanded may be so great, especially when deeply-located structures are involved, as to be impossible of attainment. Under such circumstances we would be confronted with a condition which might have been eradicated had we acted promptly, but which our omission had allowed insidiously to develop and compass the destruction of the patient.

4. We know that in a certain proportion of cases treated by a cutting operation alone, recurrence will not take place and the cure will be radical. On the other hand, we also know that we never can assure any one patient that recurrence will not take place in his case, and we are perfectly certain that recurrence will declare itself in a large proportion of all cases. If immediate post-operative Roentgenization is omitted in any one case, that may be the very one in which we shall encounter recurrence and it is highly probable that had we applied the ray immediately after the operation the accident would have been prevented. By Roentgenizing every operative case we are assured of having exerted every effort for the relief of the patient, and that we have saved all of our patients that it was possible to save.

Case 3.—Before treatment.

5. It is imperatively incumbent on us to apply any measure which has the power to destroy or inhibit malignancy, to the task of lessening the proportion of post-operative recurrences; that the Roentgen ray manifests such a power is proved beyond a doubt, and the clinical experience of those who have thus employed it, with a correct technic, has amply confirmed the validity of this contention.

The consensus of expert opinion to-day, then, may be broadly summarized as follows:

1. In superficial malignant lesions involving only the integument, Roentgenization is the procedure of election; 2, in operable lesions more deeply located or involving mucous membranes, the advisability of combining ablative surgery and Roentgenization should always

be earnestly considered, and such combination will give the best results in the majority of cases; 3. a course of Roentgen ray applications should follow every cutting operation for malignant disease, as a routine measure, and sometimes, perhaps, should also precede the operation; 4. Roentgenization should be persistently applied to all inoperable cases as long as the patient shows any signs of response, however slight.

IMPORTANCE OF TECHNIC.

By far the most important factor which is active to-day in determining whether the results of Roentgenization shall be satisfactory or the reverse, is the degree of knowledge possessed by the operator concerning Roentgen ray phenomena, both physical and clinical, and his ability to utilize this knowledge practically; in other words, the technic. The difference between the results of intelligent, scientific, efficient Roentgenotherapeutic technic and the reverse resembles very closely that which would obtain between appendectomies performed in a tenement-house kitchen without antiseptic precautions by a second-year medical student and the same operation performed in a well-equipped hospital by a master of surgery. The subject of technic is too specialized in character to admit of discussion in detail at this time, and I shall not enter into it further than to call attention to the following facts which have more or less vital bearing thereon:

1. There are electric conditions generated in the neighborhood of an excited Crookes tube, and perhaps other radiations than those of Roentgen emanating therefrom, which probably play a considerable part in the physiologic influence exerted.

2. The Roentgen radiation from any Crookes tube, whether of high or low vacuum, is composed of rays of varying degrees of penetrative power present in varying proportions as regards quantity.

3. Only those rays which are absorbed by the tissues, i. e., reach but do not penetrate through them, effect physiologic modification thereof. Hence an operator must know which rays are best adapted to the particular pathologic condition under treatment and be able so to manipulate the generating apparatus as to obtain them.

4. The penetration of the Roentgen radiance generated by a given Crookes tube is directly modifiable by the amount of current used to excite it and by the introduction of resistance (spark-gap) into the tube circuit. This latter factor is especially effective when a static machine is employed as the tube excitant, so much so, indeed, that a tube so low in vacuum that it gives off no appreciable Roentgen radiance at all without spark-gaps, can be made to deliver rays of high penerating power by their use.

5. Rays of different degrees of penetrating power can be filtered out of the emanation from an excited Crookes tube by placing in its path various substances such as sole leather, plain or impregnated with normal salt solution, when it is desired to eliminate those rays that are absorbable by the skin, aluminum when it is desired to eliminate the so-called "soft" rays in general, silver when the rays of high penetration constitute an undesirable factor, etc.

6. Volume, as well as penetrative power, constitutes an important element in the physiologic influence and therapeutic efficiency of this force.

7. Volume is directly proportional to the amount of current traversing the tube and indirectly proportional to the degree of tube vacuum.

8. The intensity of the *x*-ray varies inversely as the square of the distance; hence, the location of the source of the rays (anode) as regards its distance from the lesion and determination of the time duration of the exposure are factors of the first importance. Fortunately these can be calculated mathematically and are easy to ascertain; unfortunately they are as much neglected by the average exponent of Roentgenotherapy as they are easy of attainment.

9. It is necessary that the quality and quantity of the rays therapeutically administered should be under intelligent control and susceptible of measurement, and here we are confronted with a grave difficulty. The penetrating power can be satisfactorily determined by Benoist's penetrameter and Pfahler's modification of this instrument[1] has rendered it entirely safe as far as injury to the operator is concerned; but no practical instrument has yet been devised which will measure ray volume or quantity with any degree of accuracy, and volume is of as much importance in this equation as penetrating power. The operator is, therefore, obliged to rely on his experience with his own individual tubes for his estimate of their physiologic and therapeutic efficiency, this knowledge of one tube is of no value as regards determination of the index of any other, and every tube is an unmodified interrogation point to any radiologist who has not used it before.

CONCLUSIONS.

From the foregoing it is apparent that, although a man may be an excellent surgeon or an erudite physician, these qualifications of themselves do not by any means constitute him a competent Roentgenotherapeutist or justify him in wholesale condemnation of this remedial measure because of unfortunate results or a lack of good results which may have come under his observation from Roentgenization as it is commonly applied to-day. The attainment of satisfactory results necessitates on the part of the operator a good knowledge of the physical properties of the ray, a broad and comprehensive familiarity with its clinical behavior, and an intimate knowledge of the possibilities and behavior of his individual tubes and generating apparatus. These qualifications are, unfortunately exhibited by but few of those who are Roentgenizing pathologic conditions to-day, a generous estimate placing their number in the United States at about 50, and it is a matter of wonder that there are so many happy results and so few accidents. It is also not to be wondered at that the vast majority of surgeon-radiologists are much better surgeons than radiologists, but this unfortunate fact is responsible for a very large proportion of the sweepingly pessimistic reports of cases from high sources that have been ineffectually Roentgenized.

Due appreciation of these facts is gradually permeating the general professional mind, however, and inducing Roentgen operators to fit themselves properly by conscientious, special study for their work, and the time is not far distant when the beneficent potentialities of this remedial agent will be accorded the high rank they deserve in the management of this most distressing and destructive ailment.

1. Archives of Physiological Therapy, June, 1906.

Doctor and Automobile.—Almost before the general public believed that the automobile was more than a passing craze physicians were buying cars and proving that even in its early, crude state it was of immense advantage to them in the pursuit of their professional duties.—Doolittle in *The Automobile*.

METHYLTHIONIN HYDROCHLORID IN INOPERABLE CANCER.*

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While the remedy of which I shall speak is not new to me, it is new to the larger part of the profession. Methylene blue was introduced into practice in malignant tumors by Moorhof-Mosetig of Vienna. I believe the first man who introduced it into America was Willy Meyer of New York. At that time I used it a good deal by the injection method. The injections are very painful and inadmissible because it is impossible to prevail on any patient to submit to them for any length of time. Therefore, for fourteen or fifteen years, I have given methylene blue, or as it is now called, methylthionin hydrochlorid, in my own way internally.

WHEN TO USE IT.

As a rule we see cancer in an advanced state. Small cancers, local cancers, will very frequently go into the hands of the surgeons where they belong and the operation is certainly the first thing to be thought of in practice, but there are a great many cases that have never been recognized and that distinctly prove inoperable for that reason, together with others that have been operated on once or twice; for instance, cancer of the breast, or intra-abdominal cancer. The large majority of cases I have had in the last fourteen or fifteen years were intra-abdominal cancer of the liver, gall bladder and omentum and frequently combinations in all these organs. A number of cases occur on which no surgeon would dare to operate, not even to perform laparotomy to see what is going on inside. These inoperable cancers I have invariably treated with methylene blue.

One case was that of a woman in whom was diagnosed a cancer of the right ovary and of the neighboring structures. It was not accessible from below; it occurred fourteen or fifteen years ago. I gave her methylene blue. She took it a long time; she was in a low state of health; the tumor was very large; she did not get well, but when she died, after years, she had an ovarian tumor and a tumor about the size of two walnuts, only. They were cancer and there is no doubt that the whole tumor was cancer. It was reduced, I think, by the treatment. She died of her cancer, but having lived a number of years comparatively well and gaining weight, so that she was able to superintend her household. Such cases I have seen in varying numbers.

I believe I see a new case of cancer once a month at least. Of these, 20 or 25 per cent. are of the inoperable kind. Some that have already been operated on can not be turned over to the surgeon again. Then will come methylene blue treatment. I have seen such cases in fairly great numbers. They certainly count up in the course of fourteen or fifteen years. I have had one woman under observation for eight or nine years. She weighed 91 pounds at first observation; she was jaundiced and is jaundiced yet, and still weighs 91 pounds. Once in six months she reports that she is perfectly well. She is still yellow, still has lumps. Ordinarily she would have died seven or eight years ago.

One of my patients is a business man who came to me six or seven years ago. At that time he weighed 124 pounds, now he weighs 146. At that time he was not able to attend to his business. For the last four or five years he has attended steadily to his business day in and day out. A large tumor in the epigastrium has dwindled away to about the size of a walnut. He is apparently well and weighs 25 pounds more. He certainly knows that he is sick and accordingly he will complain, but he goes about from morning to night.

So I can say that I have a number of cases. I do not think, however, that I have ever cured a case. I have seen patients die during the treatment, but I have also seen them comparatively well, attending to business, living three, four, seven and eight years, and perhaps finally submit to their disease.

In the last few months my attention has been directed to the large number of bodies that are favorably influenced by light, that have fluorescent qualities. It appears that methylene blue belongs to that class. I have commenced to expose my methylene-blue patients to the sunlight; whether it will be of any use I can not say. I have exposed them in the solarium or in bed rooms, kept them there undressed hours and hours, as long as their household or business will permit them. It is not impossible, it is even probable, that light will do a great deal more in connection with methylene blue than methylene blue alone. I simply say I am positive that it has rendered me a great deal of good service in at least 120 or 150 cases in the course of the last fifteen years. I have not gone before the profession with my results to any great extent. Only now and then have I mentioned them before societies, but never to such an extent as now. A number of physicians and surgeons in New York have had their attention drawn to the subject and are trying the remedy. It is well tolerated.

HOW TO USE IT.

I give the drug in pills, in small doses, 2 grains a day, and run up slowly to 3, 4 and 6 grains a day. I have heard of bigger doses being given, but I have never required larger ones. I think the 2 or 4 grains should be made up in pills with a dose of three-fourths grain of extract of belladonna daily. I know that the extract of belladonna will relieve the dysuria much better than nutmeg, which has been recommended for that purpose. When you give 6 grains there should be three-fourths of a grain of belladonna given through the day, because adults will not bear belladonna so well as children. They are easily overdosed, they get dry throats in much less time than children with comparatively large doses. It is easy to give it in that way. I frequently combine it with arsenous acid (arseni trioxid). The dose would be 1/40, 1/30 up to 1/20 of a grain of arsenous acid three times a day. It can be made into pills with belladonna and methylene blue and there is no harm, when occasion requires, to give strychnia or extract of nux vomica in order to make up the pill, so the prescription would be 2 to 4 to 6 grains of methylene blue in four doses. It is best given after meals, one at bed time, with perhaps 1/10 grain of strychnia and 1/10 grain or more of arsenous acid a day with or without a vegetable purgative if that be necessary.

Patients should be told at once that the urine will be blue from the very beginning, that it will stain the linen and that the stains can not be removed. I advise, therefore, my patient to have an old handkerchief handy and to wipe off the last trace of urine. Apart from that, patients will not suffer any convenience. In my experience not one in twenty will complain of dysuria. The belladonna appears to act very well. I have recommended it in a number of cases operated on in order to

* Remarks made in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

prevent relapses. It is impossible to speak with mathematical certainty about the result of that, but I believe that relapses have been prevented. I should recommend it in every case of cancer of the uterus that has been operated on and when relapses must be feared. I believe that I have seen less relapses since that has been done. Still, an actual, statistical proof of negative experience can not be had.

CONCLUSION.

Because I considered the matter of too great importance to be published prematurely, I have not spoken of it extensively before. I wanted to be perfectly sure about my results. I wanted to have a sufficient number of cases to base my assertions on. I believe I have now waited long enough. I think that after fourteen or fifteen years one is entitled to speak of a subject that appears to be of great value. It has done a great deal of good in my practice. I have certainly restored a good many people to their work. I have kept a number of people alive two, three, six and eight years longer than would have been their share.

DISCUSSION.

DR. H. R. SLACK, La Grange, Ga., said that he had had a limited experience in the use of methylene blue in inoperable cases of cancer. In 1895 a man came to him complaining of sore throat. Examination showed an alarming condition. There was evidently carcinoma of the tongue. He referred him to a specialist in throat diseases in Atlanta, who pronounced it an inoperable case of cancer of the tongue. The man returned about six weeks later. At that time he could swallow no solids at all. Dr. Slack began the use of methylene blue, injecting hypodermically 1 c.c. of a 2 per cent. solution every other day. The treatment was very painful, but was very satisfactory. At the time he began treating him with methylene blue the cancer was as large as an egg. It diminished rapidly in size and the man lived for three years in comparative ease. Another case was that of a woman with inoperable cancer of the uterus, which involved the vagina. General metastases had taken place. She had hemorrhages almost daily. He used methylene blue in that case and the woman lived for seven years in comparative ease, and attended to her household duties. Up to three weeks before her death she did not have to use opium to soothe her pain. The methylene blue relieves the shooting pain that patients complain of, and it certainly is the most satisfactory treatment for inoperable cases involving a mucous surface that he has seen. *X*-ray is best for external cancers.

DR. W. J. ROBINSON, New York City, said that his experience with methylthionin has been limited to gonorrheal urethritis. In 1895 he published an article on that subject in the *New York Medical Journal*, in which he reported a severe case of strangury and dysuria following the use of this drug, and for a long time after that he did not use it, for the effect was a very severe one. He was not at all certain, however, whether the bad result was due to the methylene blue or to certain impurities in it, or to a different drug substituted for it. For a long time methyl violet was (inadvertently or ignorantly, not deliberately) substituted by some druggists when methylene blue was prescribed. He declared that the physician should make sure that he gets a United States Pharmacopeia preparation, or, better still, that he specify a certain definite brand he knows to be all right. Many dyes go under the name of methylene blue which are really not methylene blue, but substances injurious to the system. Some of these substances contain a good deal of arsenic and zinc.

DR. S. SOLIS COHEN, Philadelphia, said that he has given medicinal methylene blue in large doses, that is to say, from 5 to 10 grains, frequently 15 grains, in a day; not, however, in the treatment of cancer, in which conditions its internal use is new to him. He was speaking as to the tolerance of the human organism toward the drug. He has never seen strangury or dysuria or any untoward effect whatsoever. Patients—chiefly cases of chronic or obstinate malaria or malarial sequelæ—having been cautioned that their urine would appear blue, have been spared any fright from this source. He asked whether Dr. Jacobi considered that the fluorescent effect of the methylene blue could be stimulated by *x*-ray or by artificial light as well as by sunlight. He has seen good results from the method, using, however, fluorescin or esculin or quinin. He will try methylene blue with the artificial radiation also.

DR. W. J. MORTON, New York City, said that the trouble in treating these inoperable cases is well known. He thinks it wise to point out the salient idea of prolonging the lives of such patients, who are often invaluable people. It is well to dwell on palliative measures as well as on the will-o'-the-wisp seldom reached, viz., a complete and rapid cure. He welcomes the position that Dr. Jacobi outlined in another sense. He is most interested that a man of Dr. Jacobi's great and varied experience in medicine should see his way to drop the purely drug side of the remedy and turn to the physical, for instance, the nature of fluorescence. In 1902 Dr. Morton published his first observations on the value of fluorescent drugs in general. He followed that publication up at the end of two years, and after a good deal of experience thought it a matter of duty to point out how important this matter of fluorescence is in the administration of medicines. He believes that the effect of certain medicines is due to their fluorescence and not to any other pharmacal quality. It is not absolutely known how quinin will cure malaria. May it not be due to its quality of fluorescence? In regard to the class of cases Dr. Jacobi alluded to Dr. Morton said that he has used methylene blue only in one instance, for at that time he drifted into the other fluorescent substances, and his next experiences were with quinin and with fluorescin and esculin. The fact that many medicines owe their efficacy to their fluorescent quality was brought out first by experimenters who confined their experiments entirely to light, viz., the Finsen light and sunlight. Considering that the practice might be broadened, he has been in the habit, since 1902, in all cases of cancer of saturating patients with one fluorescent substance or another, often the fluorescin, often quinin, and then submitting them to the *x*-ray, to radium and to the high-frequency currents. He has verified what he published in THE JOURNAL A. M. A., June, 1904, by administering to himself fluorescin in aqueous solution 1 to 30, 30 to 40 drops. In 20 minutes this quality of fluorescence will be observed in the urine, and in case there is an open ulcer it may be observed on the dressings. If such an experiment be made and the patient be taken into a dark room and good radium be used and the radium tube (which in itself has no light and is enclosed in an aluminum capsule), be placed in the web of the finger, in from eight to ten minutes any observer will be able to follow the hand by aid of the light spot produced. This is an absolute proof that radium sets up fluorescence in the living being at the site of disease. If Dr. Jacobi would add to his methylene blue the treatment by the *x*-ray and the radium, it would probably be a still further advance over his present splendid results.

NOSTRUMS AND FRAUDULENT METHODS OF EXPLOITATION.*

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The charge is frequently made that, in discussing the so-called "patent medicines," writers and speakers are extremely uncharitable in that they do not even attempt to differentiate between the good and the bad, but class them all under the unsavory term "nostrum," which em-

* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

* Published by permission of the Secretary of Agriculture and the Postoffice Department.

braces everything that pertains to charlatanism and fraud. In order that there may be no misunderstanding, permit me to state at the outset that in this paper nothing will be considered except what will be denominated by the most charitably inclined as nostrums.

The chief transgression of nostrums lies not so much in the composition of the remedies as in the methods used for exploiting them. Most of the medicines employed by nostrum venders consist of one or more drugs of recognized merit. The fraudulent element lies, to a very large extent, in the mystic, misleading and deceptive advertising literature employed for exploiting them. It seems that the more extravagant and exaggerated are the claims made for a remedy the better it succeeds. It must, however, be stated that there are some mixtures which are considered as good "repeaters" and which depend largely for their success on the presence of some habit-forming drug.

Promoters of nostrums take advantage of many features that have been or are at present prominently before the medical profession and which have been, in a measure, popularized by the lay press. Purported wonderful curative virtues of radium are called into vogue, the efficacy of electricity is drawn on, the heralded value of lecithin as a brain food is not forgotten, new drugs claimed to be found in foreign lands are utilized, and even the physical laws have not escaped, as is shown by the mechanical appliances utilized for increasing the supply of blood to the generative organs by means of vacuum apparatus.

Many of the remedies might be called "cure-alls," but for convenience the following classification, based on the claimed curative features, is employed.

HAIR RESTORATIVES.

"ANTI-KINKINES."

The mixtures represented by the above term are advertised in such papers as are circulated to a considerable extent among the colored race. The claims made for them are that they will straighten or make straight kinky, knotty, curly hair, produce a luxuriant growth of hair, and make gray hair return to its original color. The advertisements generally employed by these concerns usually represent the cuts of the "before" and "after" treatment, intending by so doing to give the impression that the remedy advertised produces remarkable results.

"CLOSSINE."

"Clossine" is advertised by the Bruno Manufacturing Company, Boston. It is an ointment, consisting for the greater part of petrolatum. This remedy does not claim to take the kink out of the hair, but simply states that it will make it straight. It is also represented that "Clossine" "turns gray hair dark," which was questioned when the article first came up for investigation. In reply the manufacturer submitted a sample colored black, and represented that this particular form of "Clossine" was employed when it is desired to make gray hair black. The mixture is the same as generally employed, the difference being only that a black dye was used instead of some other color. The first sample examined was colored green, and if the same logic is followed out green hair would result when the green ointment is applied, a chameleonic curiosity brought up to date.

"GLOSSINE."

This remedy is advertised by the Helen Martin Toilet Company, Richmond, Va. It is represented that the mixture will "restore gray hair to its former color;" also that it will make the hair "grow out on bald spots." An investigation showed that the mixture employed contained the following ingredients:

Quinin Sulphate.	Oil of citronella.
Resorcin.	Oil of bergamot.
Petrolatum.	Tr. cantharis.
Stearic acid.	Harmless green color.
Paraffin.	

Virtually no defense was made when the above firm was confronted with the fraudulent nature of its claims. While it must be admitted that some of the ingredients present in the formula are generally recognized as having some virtue in favorably influencing the growth of hair, exactly on what remedies is based the claim that it will make hair "grow out on bald spots" it is difficult to understand, and the company did not throw any light on this point, much to the sorrow and regret of many of us.

"KINKINE."

The mixture employed under the above name consists of cocoanut oil and crude petrolatum, the mixture being flavored with oil of bergamot. One of the fraudulent schemes employed by this firm, which is somewhat novel for this class of remedies, is the claim that the marvelous properties possessed by the mixture were discovered by a famous English physician who, an investigation showed, was purely an imaginary individual.

"OZONIZED OX MARROW."

This remedy is distributed by the Ozonized Ox Marrow Company, Chicago. It is represented as a wonderful discovery and that it makes kinky hair straight. The "before" and "after" treatment pictures referred to above are very generally employed. Examination shows that the composition of the preparation consists of lard, beeswax, castor oil, beef marrow, gum benzoin, oils of orange, lemon, cloves, lemon grass and lemon flower. The name "Ozonized Ox Marrow" itself is a fraud, because, first, it does not contain any ozone, and, second, it is impossible to ozonize such a mixture. Some experiments were made to ascertain whether there was any possible basis for the claims made by this firm, which resulted in the fact that this mixture has no more virtue in causing kinky hair to assume a straightened appearance than any other ointment consisting of similar but entirely different ingredients, neither having such properties.

"STRAIGHTINE."

This is manufactured by the Nelson Manufacturing Company, Richmond, Va. It is represented that "Straightine" makes kinky, curly hair straight and that it is unlike any of the other preparations on the market. "Nelson's Straightine, the latest discovery for making Knotty, Kinky, Curly Hair Straight." The mixture employed for the purpose of accomplishing these marvelous results consists of petrolatum 90 parts, purified beef suet 10 parts, and oil of bergamot to give a suitable flavor.

CONSUMPTION CURES.

"EAST INDIA CONSUMPTION CURE"—DR. STEVENS.

The promoter is a Mr. W. A. Noyes, Rochester, N. Y. The scheme employed is to advertise in local newspapers "a free treatment for consumption," giving at the same time the formula of the medicinal compound to be used with instructions that if the prescription can not be filled by the local druggist to advise the advertiser of this fact and forward the necessary amount of money and the prescription will be filled from headquarters. The

published prescription contains a number of coined names which are not familiar to the druggist, neither can he nor any one else find the same in either ordinary or extraordinary pharmaceutical literature. Among these names are "Asiatic Halish Sativa," "Diosmæ" and "Cashgar." The invariable result is that the druggist is unable to comply with the request of the individual delivering the prescription, and if the party desires to secure the remedy it will be necessary to comply with the suggestion contained in the advertising literature, namely, to forward the prescription to the advertiser.

It is held out in the advertising literature that the chief active ingredient of the medicine is cannabis sativa. On investigating a sample of the material it was found to contain the following ingredients:

Cinchona bark powdered.	Rochelle salt.
Ipecac.	Morphin.

While a combination of the above character is useful as a medicinal remedy, there is no truth whatever in the representations and claims that it is a consumption cure. It is a snare and a delusion in that it robs the unfortunate victims of valuable time which, if utilized by the proper open-air treatment, might result in the restoration of health.

In this connection it might be of interest to note that the scheme employed by this firm, namely, the publishing of prescriptions containing a number of coined names which are known only to the promoter is frequently employed by unprinicipled advertisers. The prime object, of course, is to compel would-be patients to forward prescriptions to the office of the firm advertising same for compounding. The filling in some cases requires money in advance, but frequently the prescription is filled on the most trivial pretext and sent by express c. o. d. If the prospective patients are disinclined to pay for the package, a bluff is sent from the office that an order is filed with the firm. The above scheme also in a measure discounts the local druggist in the eyes of the patient because he is led to the belief from the advertising literature that the formula is readily filled by a competent druggist. This is an unjust reflection.

"LUNG-GERMINE."

A remedy advertised by the Lung-Germine Company, Jackson, Mich. Not one of the members of this company possesses so much as a high school education, to say nothing of medicine. The claims made by this company are clearly indicated by the following quotations taken from the literature employed:

"Consumption Cured by Lung-Germine."

"Consumption and all diseases of the throat, lungs and bronchial tubes permanently cured by Lung-Germine."

"Permanent cure for Consumption."

"The permanent cure of Consumption."

Analysis of the sample submitted shows that it is simply an hydro-alcoholic solution, containing 0.72 per cent. of ferric sulphate, 1.11 per cent. of magnesium sulphate, 0.03 per cent. of manganese sulphate and 9.08 per cent. of free sulphuric acid. During an interview the charge was made that the chemist did not know his business, because he failed to find "Ochra" (an iron ore) which was present. The history of the purported discovery of "Lung-Germine" is similar to that of many other fraudulent remedies. In this case the discoverer happened to be "an old German doctor-scientist who lived in Hamburg, Germany." This doctor "at last succeeded in finding a combination or formulæ that would actually destroy tubercle bacilli, regardless of their localization, without injury to the patient. This is the underlying principle by means of which "Lung-Germine" is claimed to eradicate tuberculosis from the system. To quote again:

> The immediate and direct operation of Lung-Germine is the destruction of the disease germs, whether they be located in the lungs, bronchial tubes, glands of the throat or neck, or in any other organ of the human system, is entirely immaterial. . . . The lungs, as a matter of fact, are very sensitive organs, and when these germs are being torn from their lodgments and discharged together with the impurities and secretions, it often weakens the patient considerably. *This is the most important period of the whole treatment and the turning point to recovery.* . . .

It is almost unnecessary to state that it is well known that there is no single medicine or mixture of medicines which can enter the living tissues of the human system and destroy the tuberculous germs, and, furthermore, there is at present no known medicine which can cure consumption.

Throughout the advertising literature accompanying "Lung-Germine" the representation is made that "Lung-Germine" is a positive cure for consumption. This is also indicated by the guarantee slip which the patient is requested to fill out and return to the company. The guarantee is, in substance, that the company will return all money paid to the Lung-Germine Company for the first month's treatment of "Lung-Germine," provided no benefit or favorable changes are made in the patient's condition during this time. The guarantee, however, is quite a different thing from the representations made by the company, namely, that "Lung-Germine" will effect a permanent cure. The price of a two-ounce bottle is $5.00.

PLASTERS AS POSITIVE CURES FOR CONSUMPTION.

The company promoting this scheme is located at Camden, Maine. The plaster employed is similar—except in multiplicity of drugs utilized—to those commonly used by the medical profession and the laity for the treatment of certain affections. The composition of the plaster as represented by the company and confirmed in part by analysis is set forth by the following formula:

140 lb. Rosin.	2½ lb. Venice turpentine.
20 lb. Tar.	1¼ lb. Oil of hemlock.
5 lb. Mutton tallow.	1¼ lb. Oil of red cedar.
10 lb. Burgundy pitch.	1¼ lb. Oil of origanum.
10 lb. Beeswax.	1¼ lb. Laudanum.
5 lb. White pine turpentine.	1¾ lb. Camphor gum.
2½ lb. Balsam of fir.	5 oz. Tartar emetic.

With these plasters it is represented not only to be able to cure consumption, but "Lung Complaints, and all Bronchial Troubles, Kidney Diseases, Heart Diseases, Liver Complaints, Dropsy, Female Weakness, Sore and Weak Eyes." It is the height of folly for any individual to claim that a simple plaster will cure all the diseases contained under the above headings. One of the reasons advanced for the superiority of the plasters is that they are spread by hand and not by machinery. They certainly contain nothing to warrant these representations, neither is the effect produced by the application of the same such as to warrant them. To show up the above ridiculous features it is only necessary to enumerate such diseases as chronic bronchitis, bronchiectasis, bronchial asthma, emphysema, gangrene and abscess of the lungs, as well as Bright's disease, heart disease due to mitral lesions, dropsy due to kidney or heart disease, etc. Exactly in what manner plasters of the type represented can have any influence on sore or weak eyes is difficult of comprehension.

The manner in which it is claimed that these plasters act is set forth in the following quotation:

The remarkable cures performed by these plasters are brought about by their action in drawing from the body and absorbing the poisonous germs of disease, and when one has been applied on the affected part of a person for a few days, it will become so impregnated with disease that it can absorb no more, therefore the necessity of changing for fresh ones often.

It is difficult to understand in what miraculous manner these plasters are able to draw from the body and absorb the poisonous germs of diseases.

The advertising literature contains numerous testimonials on which evidently are based the following misrepresentations relating to what these marvelous plasters are known to cure:

SOME OF THE DISEASES ORDWAY PLASTERS ARE KNOWN TO CURE.

We have on file, and can produce, unsolicited testimonial letters covering all the diseases mentioned below, either from the people themselves or actual eye witnesses. What stronger evidence could we give? Consumption, Rheumatism, Pneumonia, Fever, Lame Back, Lame Side, Female Weakness, Sore Lungs, Sciatica, Dropsy of the Kidneys, Kidney Trouble, Asthma, Heart Disease, Diphtheria, Dyspepsia, Bright's Disease, Backache, Lumbago, Bronchitis, La Grippe, Catarrh of the Stomach, Neuralgia and Sick Headaches, Abscess, Sprains, Cuts, Goiter, Sore Breast, Blood Poison, Nervous Prostration.

It is well established at present that the vast majority of testimonials are either fraudulent or have a questionable cause for existing.

"TUBERCULOZYNE."

This remedy is placed on the market by a firm located at Kalamazoo, Mich. It is very interesting to note that the claims made are only for the cure of consumption.

Two liquid preparations are employed, one colored amber with caramel, and another red with an anilin dye. The chief active constituents of the red medicine are alcohol and phosphatic material. Those of the amber-colored preparation are alcohol and a small quantity of an organic copper salt. It is also claimed by the firm to contain heroin. The presence of this, however, could not be established, and even if present it certainly does not possess a curative effect for consumption.

A careful investigation of the remedy discloses the fact that the virtue of this medicine is claimed to reside almost solely in the small quantity of organic copper salt present. An extended investigation was entered into for the purpose of ascertaining to what extent such a copper salt was known by the medical profession to be of value in the treatment or cure of consumption, and no one appeared to be familiar with any properties inherent in organic copper salts that would be useful in the treatment or cure of consumption. It was found, however, that a considerable number of experiments had been made by a French physician in some of the French hospitals with certain organic salts of copper, and, according to his results, such copper salts appear to have a beneficial influence in the treatment and cure of consumption, and when the case came up for final hearing this was the evidence presented by the company to show that it has a substantial basis for its remedy. Under the conditions it was difficult to assert that the remedy was not consistent with its claims. This brings out one of the most difficult features constantly being met with in dealing with these products. Medical literature teems with just such things as these, and it is not difficult to find evidence apparently of an authentic character to bolster up almost any fraudulent claim. Such is not only the case with past records, but current literature is following in similar footsteps. An interesting feature in connection with the treatment of this remedy is that the general directions prescribe the regularly recognized open-air treatment, coupled with a careful regulation of the diet. This is undoubtedly the basis of any success that may result from the use of this remedy rather than the medicine itself.

CURE-ALLS.

"AMERICAN HERB CURE."

The above name is employed by a Dr. Munroe, doing business throughout the states west of the Mississippi River. The scheme employed is that of an itinerant drug vender. The claims are those usually represented by men of this type, namely, cure-all, as is clearly indicated by the following extract taken from the advertising literature:

It will remove all animal parasites from the system; positively cures Rheumatism, Neuralgia, Ague, Catarrh, Scrofula, Syphilitic Humors and is a Specific for Liver and Kidneys.

The representation is made that a number of different mixtures are employed for the cure of different affections. An investigation, however, shows that the medicines marked 1, 2 and 3, respectively, are of one and the same composition, namely, senna leaves, black cohosh root, burdock root, mandrake root, colocynth apple, aloes, capsicum, and sassafras. The manner in which this mixture is employed is simply to make an infusion and take of the resulting tea as indicated by directions accompanying each package.

To illustrate the absurd features contained in this treatment, it is necessary to refer only to a case that came under investigation, namely, that the said Dr. Munroe took for treatment and represented to effect a permanent cure of a case of diabetes mellitus for the consideration of $30, and if he failed in making a cure the money would be refunded. It is only necessary to state here that the case was not cured and that Dr. Munroe did not refund the money. The reason set forth by him was that the patient did not represent to him the actual condition of the disease, that instead of its being in the incipient stage it was actually in the chronic condition. This latter point is brought out to show the schemes usually resorted to for the purpose of evading the return of money once in possession.

"FORCE OF LIFE"—REMEDIES EXPLOITED BY THE FORCE OF LIFE COMPANY, NEW YORK CITY.

According to the advertising literature, these remedies embody what might be considered some of the latest achievements both in chemistry and medicine. The sheet anchor of the whole system appears to reside in the chemical compound known as lecithin, "The Force of Life," and the recently discovered chemical element, radium. The literature which sets forth the virtues of lecithin describes in most glowing terms how Dr. Hadley had discovered "in the sheen of the midnight glow" a method for making lecithin synthetically. It is represented that lecithin possesses the power of rendering the human system immune to the invasion of bacteria and that it actually kills microbes and germs, thus preventing them from producing disease.

The preparations employed by this firm are represented in the form of liquids, tablets and capsules. Four liquid preparations were submitted, marked "First Week," "Second Week," "Third Week" and "Fourth Week," respectively, leading to the belief that they are either of different strengths of the same medicine or solutions containing different ingredients. An examination, however, showed that they are essentially of the

same composition, differing only slightly in the percentage content of the several component constituents. The following results represent the approximate average composition of the four packages:

	Per cent.
Water	71.53
Alcohol, by weight	7.00
Volatile acids as acetic	0.61
Non-volatile acids as tartaric	0.70
Sugars	3.96
Glycerin	10.18
Glycerophosphates	2.89
Undetermined	3.13

As above pointed out, lecithin is the agent on which is largely based the wonderful virtues of these remedies. A careful search for this compound was made, but it could not be detected.

Two kinds of tablets were also submitted, one lavender in color and the other yellow. The yellow tablets contain terpin hydrate, heroin and licorice root, and the lavender tablets contain inspissated oxgall, pancreatin, colocynth extract, quinin hydrochlorate, extract of nux vomica, extract of taraxacum, and sodium and calcium glycerophosphates. It was impossible to establish the presence of lecithin in either mixture.

The capsules were designated "Life-Ray Capsules" and were claimed to contain either radium or to be charged with radium. A careful examination of the capsules and their contents shows that they do not possess any radio-activity, but, on the other hand, consist chiefly of starch and calcium sulphid. It was represented that these capsules could not be purchased, but were simply loaned to the patient as an adjunct in the treatment with the other remedies.

Had Dr. Hadley succeeded in preparing lecithin artificially it would certainly be considered a "marvelous discovery," but the simple fact that none of the medicines examined contain this compound indicates that he is not taking advantage of his discovery. A considerable number of observations have been made relative to lecithin as a medicinal agent, but thus far no one is able to point to any noteworthy results. Whether lecithin will ever attain the eminent position medicinally ascribed to it by some remains for the future to demonstrate. It is a well-known fact that this chemical is present in nerve tissue and is a common constituent of many food products, such as the yolk of eggs, beans, peas, lentils, milk, etc. Exactly in what manner and in what form lecithin is absorbed and utilized is not definitely known, but it seems singular that lecithin isolated by solvents from different sources and given in minute doses should possess the claimed extraordinary virtues while the influence of the comparatively large amounts taken daily with food seems to be lost sight of.

"NUTRIOLA."

The methods employed by the promoters of the remedies sold under the above title have been made public in THE JOURNAL.[1] A considerable number of mixtures are used to meet almost all conditions of impairment. All of the medicines employed consist of useful ingredients, in various combinations, similar to those commonly employed by the medical practitioner. They are all of recognized merit, but possess nothing novel nor do they surpass in merit other well-known remedies of similar combinations.

It is contended that the Nutriola medicines are new because it was admitted that "at best the chemical analysis was only approximate." All the chemists in the world, severally and combined, could not make more than a partial analysis, far from proximate, of a sample of the well-known medicine, "Warburg's Tincture," and yet who for a moment, because of this impossibility, would think of calling "Warburg's Tincture" a new medicine. Again, it is contended that the chemist reported the presence of strychnin in one tablet which it does not contain, but it does contain "a small amount of solid extract of nux vomica, belladonna, etc., combined with other valuable chemicals." The company also contended that a certain red tablet contained, among other valuable ingredients, iron peptonate and manganese dioxid, and a yellow tablet contained pepsin, pancreatin, Taka-diastase, aromatic powder, etc. When, however, informed that the red tablet was simply Blaud's Mass and in the yellow tablet it was possible to recognize positively only one medicinal agent, viz., ginger, it was admitted that tablets containing such ingredients were used at one time. The yellow tablets were tested for both amylolytic and proteolytic activity with negative results. The Nutriola firm at first refused to furnish the composition of its remedies, but finally did so, and all conclusions, so far as the remedies are concerned, were based on the information supplied by the company.

"SALVITA REMEDIES."

The Salvita Medicine Company, Battle Creek, Mich., announces:

> The Only Sure Cure for Nervous and General Debility, . . . Organic Weakness, Impaired Vitality, All Rheumatic Affections, Heart, Stomach, Kidney and Liver Complaints, Female Troubles, Catarrh of Any Organ and All Chronic and Wasting Diseases.

It is also represented that these remedies will conquer all physical pains and bodily weakness and are:

> A true specific for all cases of addiction to liquor, morphin, cocain and tobacco habits. . . . Cures all blood disorders. . . . It does not contain any alcohol or opiates.

The patient is also led to the belief that all these wonderful results are produced without the use of drugs.

Examination of the remedies employed by this company shows that they are possessed of the usual medicinal agents employed for treating various affections. The "Nerve Tonic" contains hypophosphites, nux vomica, clover tops, sarsaparilla, gentian, etc. The "Salvita Oil" is nothing but an ordinary liniment, the chief constituents of which are turpentine, gum camphor, capsicum and castile soap. Among the other preparations employed by this firm are "Kidney and Bladder Tablets," "Liver and Constipation Pills," "Cold and Lagrippe Ovules." It is represented that the chief ingredients contained in the "Cold and Lagrippe Ovules" are quinin sulphate, ammonia muriate and camphor. An investigation showed that these pills contained neither quinin sulphate nor ammonia muriate, but in place of them acetanilid is employed. Attention also must be called to the fact that it is represented in the advertising literature that these preparations do not contain any opium. This representation is false, opium being one of the chief constituents of some of the preparations. From the above information it can readily be seen that a vast majority of the representations made by this firm are false and fraudulent.

(To be continued.)

1. THE JOURNAL A. M. A., April 28, 1906.

Naming of Carbon Compounds.—One: This syllable indicates the ketone group, R'.CO.R', thus propanone or acetone is $CH_3.CO.CH_3$.—*Pharm. Rev.*, August, 1906.

UTILITY OF SALINE SOLUTION IN TREATMENT OF FEVER.*

J. MADISON TAYLOR, A.B., M.D.

PHILADELPHIA.

Increasing experience in the employment of physiologic saline solution (6/1000) by the mouth in all febrile states in children encourages me to offer present certain conclusions. This solution was formerly and erroneously called "normal salt solution." My findings are not sufficiently comprehensive as yet to report in full, but this shall be done later.

In a paper[1] read as part of a symposium on pneumonia before the Medical Association of Greater New York, Dec. 11, 1905, the rationale and value of the measure was outlined, with some items of history and personal experience.

The use of salines by hypodermoclysis and later by enteroclysis has become an established form of treatment affording relief in many exceptionally severe disease states. The results noted in patients *in extremis* have been pretty well established to be of more than partial value. The effects attributed to this agency are variously interpreted. In this short communication it must suffice to outline the physiologic warranties and to point out such explanations of the indications as are so far acceptably offered.

NEED OF SALINE SOLUTION.

Biologically it is admitted that, our origin being from marine forms of life, our cells still retain certain features exhibiting marine characteristics. The fluid media, the body fluids, the blood, depend for their most important activities chiefly on an adequate proportion of chlorid of sodium, whatever rôle the other salts may play. The significance of this fact was clearly set forth by Sajous,[2] who made plain that the chief rôle, in the maintenance of the integrity of the blood, is played by the status of its alkalinity. Some distinctly original observations and conclusions are presented bearing practically on our interpretation of vital phenomena, fully sustained by citations.

A brief outline of the clinical bearings of these facts may serve as clinical indications. The plasmatic salines are supplied variously in the food in health, as condiments and as constituents of certain articles, but in disease a restriction and alteration of customary diet, anorexia, etc., cuts this down. The outgo proceeds unchecked, in many conditions it is markedly increased. There being no intrinsic reserve, since the source of supply is wholly external to the organism, the tissues must soon suffer a saline starvation, with its obvious consequences: impairment of cellular interchanges, osmosis, diapedesis, etc., but especially a lowering of the oxygen-carrying power of the plasma. In my paper[1] referred to it is said, whatever theory of immunity we adopt, whether we conclude with Büchner that the blood protects the body through the presence in this tissue of "alexins," whether, with Ehrlich, we grant the tissue cells the power to secrete "receptors," whether we agree with Sajous[2] that the internal secretions supply the needful protective agents to the blood, the fact remains that the life fluid is unquestionably endowed with a substance capable of staying the hand of death when conditions are such as to enable it to act unhindered. "We know now," recently wrote Behring, "that immunizing antibodies regularly appear in the blood whenever an infectious disease terminates in recovery." Is this not the one feature of the problem which should command our keenest interest? Have we not here the one greatest weapon through which it is possible to reach and overcome deadly pathogenic elements? It is to this weapon and to the preservation of its integrity as a potent means of attack that reference is here made. We are looking on all sides for immunizing sera, which, like antitoxin in diphtheria, will enable us to cope with the great scourges of humanity, among which pneumonia is rapidly taking the lead. In a recent address, Behring, advancing it as a biologic law, says: "Specific immunizing substances can be obtained in no other way than from the blood and organic juices of individuals who have passed through the diseases against which we wish to produce immunity." Now, since saline solution can, as proven experimentally, maintain the blood's antitoxic properties, it can do so only by enabling these blood and tissue juices to act efficaciously and specifically, and, according to Sajous, the early use of saline solution, in all febrile infections, must, therefore, produce the effects that we are trying to obtain from specific sera.

We fail to preserve economically the integrity of the immunizing principles of the blood if we wait until the system is practically overwhelmed by toxins; until the functions of the cells that produce them are well nigh paralyzed; until the lungs are engorged to such an extent that cyanosis occurs; until pulmonary edema is present or threatened; until the overworked kidneys can withstand no further sudden assaults of toxic waste; until the blood, already poor in oxygen, can hardly bear dilution, and, finally, until the nerve centers are so dulled that they no longer respond to peripheral impressions. As well to wait for the moribund stage to occur in a case of diphtheria before using antitoxin as to employ saline solution during this stage of desperate struggle.

Very different is Sajous' conception of the importance of the early and constant use of saline solution. Here all untoward features, just reviewed, are taken into account, and the aim is eminently in keeping with the most advanced teaching of experimental research, namely, "to preserve and enhance the blood's bactericidal and antitoxic properties from the outset of the disease." This was embodied over three years ago by Sajous in a sentence which should be carefully noted, since it has already been instrumental in saving life:

> **The primary effect of deficiency of alkaline salts in the blood being to inhibit nutrition, to impair the efficiency of, and finally arrest the protective functions of the organism, it constitutes one of the most active causes of death.**

The practical importance of the blood's alkaline salts has been emphasized repeatedly. A brief quotation from Howell's recently published "Physiology" will suffice:

> **The salts of the blood have most important functions. They maintain a normal composition and osmotic pressure in the liquids and tissues of the body, and by virtue of their osmotic pressure they play an important part in controlling the flow of water to and from the tissues. Moreover, these salts constitute an essential part of the composition of living matter. In some way they are bound up in the structure of the living molecule, and are necessary to its normal reactions or irritability.**

BLOOD SALTS AND FEVER.

Now, given any disease attended by marked fever, the loss of the blood's main salt, sodium chlorid, is not replaced, owing to restricted diet, anorexia, and the many

* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

1. N. Y. Med. Record, Jan. 13, 1906.

2. "Internal Secretions and Principles of Medicine," 1903. p. 778 et al.

factors which cause the patient to reduce greatly the intake of normal food. At least one-half ounce of sodium chlorid being voided daily in the urine of an adult, the time soon comes when the cells are hampered in their vital functions, they gradually cease to secrete their autoprotective antibodies, thus giving free sway to the pathogenic elements. In pneumonia especially, the cells hold their sodium chlorid in reserve and the salt soon ceases to appear in the urine. But watch these cases; notwithstanding Nature's attempt to thwart a desperate situation, the patient steadily sinks, deprived of that which represents in this connection their *pabulum vitæ*. Sajous' teachings are thus summarized:

Steadily as the febrile process advances the salts are consumed, and being inadequately renewed, the vital and defensive functions are increasingly hampered until life ceases.

Hence he advises early and continuous use of saline solution, from the outset, at the end of all fevers, so as to avoid any chance of reaching an individual danger limit.

What connection is there between a febrile process and the adequacy of the blood salts? In reply I quote from a book[3] published since the above teachings were placed on record. Referring to the diminution of the blood alkalinity during fever, the author says:

The cause of this change is unknown, but whatever the true explanation may be, it is probable that the change is highly important for the organism, for it is an unfavorable sign in febrile disease, and it is known that diminished alkalinity of the blood goes hand in hand with increased susceptibility to infection.

Sajous has already adduced considerable experimental evidence to the same effect, including that contributed by Metchnikoff, Behring, Nissen, Paul, von Fodor, Blumenthal, and many other authorities.

My friend, David Riesman, says that he is inclined to attribute my effects chiefly to the ingested water. His rule, in adult cases of fever, is to insist that they take four ounces of water every two hours. This induces polyuria, up to 80 or 90 ounces daily. He is convinced that nervous symptoms are thereby made less pronounced; there is less tympany and the tongue is more moist. The bowels are not made loose. My findings are on similar lines, but the bowels seem to do better for the salt. Valuable as the use of excessive amounts of water undoubtedly often is, we should approach the subject with caution, having due regard to the possible dangers of injudicious urging to take as much as possible. In this connection it is pertinent to refer to the suggestive paper of Morris Manges,[4] who also quotes Kraus.[5] In his (Kraus') recently published treatise on the "Dietetic Treatment of Cardiac Disease" he says:

Water once within the body is no longer (merely) water, but must be considered in its relations to the various salts, colloids, etc., with which it comes in contact. . . . Every drop of water introduced into the system must be excreted directly or indirectly, by the heart . . . increasing the demands on that organ.

He agrees with von Noorden that the increased drinking of water does not materially affect the breaking down of albumins. The increase of metabolism, on the whole, is great, but takes place at the expense of the carbohydrates and fats. An important point quoted from Baruch is that, whereas ingestion of hot water raises pulse rate and lowers blood pressure, cold water diminishes pulse rate and raises blood pressure, but water of 60 F. has very little effect. In a case in which the heart is no longer competent or weakened, we do well to heed the fact, pointed out by von Noorden and his pupils (Ritter, Dapper, Reetkowski and Mohr), that the daily quantity of water should be restricted to one and one-quarter liters (about 2½ pints) daily, exclusive of fluids in food. The elimination of important salts, he says, is not lessened by this restriction. Manges recommends that in infectious diseases and septic conditions the water should be given cold and in frequent small quantities.

3. Lazarus Barlow: "General Pathology," 1905, second edition.
4. "Dangers of Excessive Water Drinking," N. Y., Med. Jour., Jan. 21, 1905.
5. Handbuch der Ermalrungs Theraple, von Leyden und Klemperer, 1903.

AUTHOR'S METHOD.

My own method is to give to all children, in whom a rise of temperature occurs, freely of the normal physiologic saline solution (6/1000) usually half an hour before feeding time, every three hours. They are encouraged to drink all they will. For infants the saline solution (6/1000) is used in the modification of milk and in diluting whatever food is used. Children rarely object to the saline taste, which, indeed, is scarcely perceptible, and soon become accustomed to it. My head nurse, service of 1905, Miss Hill, tells me children occasionally noticed its unusual taste, but soon grew to like it. During my present service, Miss Fox, head nurse, tells me she observes no objections at all. Both volunteered the remark that the cases progressed apparently more satisfactorily under the saline régime.

As to the elimination of skin and kidneys, always difficult to estimate in young children, we have not secured exact data. In another year, with coöperation of my colleagues, it is hoped to make a more complete study of these points. It is likewise obviously difficult to institute accurate comparisons with cases treated otherwise. It is my hope to interest physicians whose opportunities for clinical experience are large, to employ this exceedingly simple, convenient and eminently rational auxiliary treatment. It furnishes, in reality, a form of food and, to my mind, is the essential principle of febrile dietetics.

CASE SUMMARIES.

Appended are the notes of eleven cases from my present service, chosen solely on account of their extreme severity, all showing grave complications. Four of these patients died soon after admission, being classified as moribund; yet two of these survived longer than was deemed possible.

CASE 1.—A. E., aged 10 months, was admitted April 3, 1906, ninth day of double pneumonia, accompanied by pronounced meningeal symptoms. Temperature for four days, 102 to 104.5, pulse 130 to 180, respirations 40 to 60. On fourth day temperature dropped by lysis, with corresponding drop of pulse and respiration, meningeal symptoms cleared up gradually and patient was discharged cured two weeks after admission.

CASE 2.—H. M., aged 9, was admitted April 27, 1906, second week of typhoid fever, along with bronchopneumonia at right apex. Temperature 102 to 104 for seven days; pulse and respiration correspondingly high. Dropped by lysis eighth day after admission. No other complications. Discharged cured May 25, 1906.

CASE 4.—W. H., aged 1, was admitted May 1, 1906; double pneumonia. Patient was cyanotic, temperature 99 to 101, pulse 160 to 170, respirations 90 to 100. Died 16 hours after admission.

CASE 5.—J. W., aged 22 months; had pneumonia six weeks previously in hospital. Patient returned May 7, 1906, with double bronchopneumonia. Temperature 100 to 105, pulse 140 to 180, respirations 50 to 90. Distressing dyspnea. Died May 12, 1906.

CASE 6.—D. F., aged 8, was admitted April 1, 1906, on probably the third day of a typhoid, along with pneumonia at right apex. Temperature 103 to 105, pulse 120 to 150, respirations 36 to 56 until the ninth day, when temperature dropped by lysis. During the first week there was marked distension of abdomen, lasting about three days. Patient was discharged cured April 30, 1906.

CASE 7.—J. DeG., aged 6, was admitted April 1, 1906, fourteenth day of typhoid, with meningeal symptoms. Temperature first seven days 101 to 104, pulse 120 to 160, respiration not accelerated. At the end of second week (nine days of disease) the temperature was normal. Two days later patient showed symptoms of pneumonia. Temperature for next seven days 101 to 104.5, pulse 140 to 160, respirations 40 to 54, dropped by lysis. Patient, who had been sullen and rather stupid from time of admission, brightened up rapidly on seventh day and was discharged in good condition May 28, 1906.

CASE 8.—D. R., aged 10 months, was admitted April 1, 1906, with severe pneumonia, practically moribund. Temperature 103 to 104, pulse 140 to 160, respirations 32 to 70. Lived 48 hours after admission.

CASE 9.—M. W., aged 1, was admitted May 15, 1906, with pneumonia and extremely severe gastroenteritis. Patient was poorly nourished and apparently in dying condition. There were seven or eight stools daily, almost pure mucus. Temperature 98 to 102, pulse 140 to 200, respirations 30 to 80. Lived one week.

CASE 10.—W. M., aged 10 months, was admitted April 4, 1906. Double pneumonia, involving entire left lung and apex of right lung. Life despaired of daily for 10 days. Temperature 102 to 106, respirations 40 to 72, pulse 120 to 180 for six days, then 99 to 104 next nine days, and 100 to 103 next 10 days. Normal at end of fourth week. There was more or less gastrointestinal disturbance during entire four weeks. Child was discharged in good condition May 26, 1906.

CASE 11.—L. D., aged 1, was admitted April 5, 1906, desperately ill with double bronchopneumonia. Temperature ranged from 99 to 105 for four days, then dropped to normal. Next day temperature rose to 105, pulse to 180, respiration to 60, and remained high for six days, then dropped by lysis. In 24 hours temperature rose to 103, pulse to 170, respiration to 50. Temperature dropped again in seven days and remained normal. There was marked gastrointestinal disturbance during second and third week of illness. The patient was discharged perfectly well May 1, 1906.

ADMINISTRATION OF SALINES BY THE MOUTH.

The use of salines by the mouth has been employed by Dr. J. B. Todd, of Syracuse, who twice reported his experience.[6] He gives convincing reasons for preferring the administration of salines in this way rather than by the surgical method of hypodermoclysis or the uncertain one of enteroclysis. He asserts rightly that it is not physiologic to crowd a large amount of salt into the tissues at one point and one time. A continued supply is vastly better from all standpoints.

Recently Garcia Y. Marin[7] described his success in the employment of massive injections of normal salt solution in the treatment of typhoid fever. He claims that these large daily saline infusions amply fulfil the chief indications, which are (*a*) to destroy the etiologic factors; (*b*) to supplement natural defenses of the organism against infection, and (*c*) to favor elimination of toxic principles, the retention of which causes the typhoid states. His results were an increase of blood tension, augmentation of the quantity of urine, a transitory rise of temperature followed by reduction, abundant bowel discharges and profuse sweatings, excitation of the glandular functions and nervous forces.

6. N. Y. Med. Jour., May 20, 1905; also N. Y. Med. Record, April 14, 1906.
7. Le Jour. de Med. et Chir., Montreal, March, 1906.

DISCUSSION.

DR. H. C. WORTHINGTON, Oak Park, Ill., said that he has always given mutton or chicken broth along with the food in the treatment of febrile cases, and he believes that stimulation has come from the salt in the broths. He believes that it is a thoroughly good thing to add these broths to the milk diet.

FOREIGN BODIES IN THE BRONCHI.

THEIR SUCCESSFUL REMOVAL WITH THE BRONCHOSCOPE.*

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There is such a variance in the character of the foreign bodies that find their way into the bronchi, and persons are so variably susceptible to their presence, some with slight complaints, others mortally ill, that the recital of individual experiences must surely help in the momentous decision we are called on to give. May we temporize, or must we act at once? To help in this elucidation is my reason for presenting my own observations of five cases seen in a little more than a year.

CASE 1.—On Jan. 24, 1905, in consultation with Dr. Sidney Yankauer of this city, I saw a ten months' old boy, who, while the juice of an orange was being insinuated into his mouth, inhaled one of the orange seeds. I responded promptly, arriving an hour after the accident; the child was coughing distressfully and markedly cyanotic. The coughing soon ceased and with it the breathing became freer.

Operation.—By my advice the child was taken to a hospital, tracheotomy done, and with my assistance the seed removed by Dr. Yankauer through the bronchoscopic tube. The child already showed signs of interference with vesicular breathing and pneumonia was threatened. Only prompt removal prevented that occurrence.

This case, which has been more fully reported,[1] is especially interesting in that it is the youngest patient thus far recorded as inhaling a foreign body with successful removal by means of the bronchoscope.

CASE 2.—A child, aged 6, patient of Dr. Charles A. Elsberg, swallowed a glass-headed pin. Dr. Elsberg kindly permitted me to attempt its location by direct bronchoscopy. I was unable to introduce the bronchoscopic tube successfully, nor did I persist in many attempts, as the child was already enfeebled by its coughing and distress. As the sequel showed, even if located, it could not have been extracted in the usual manner, for on introducing a large endoscopic tube through the tracheotomy wound the pin was seen lying crosswise, and it required much bending by powerful forceps to extract it. Complete recovery followed.[2]

CASE 3.—On Sept. 28, 1905, Dr. C. A. McWilliams, adjunct attending surgeon to the Presbyterian Hospital, informed me that he had a boy, aged 5, with a foreign body in the right bronchus, and as there were no bronchoscopic instruments in the institution he was in a quandary. I cheerfully offered my services, and, as the patient was then in a comfortable condition, an appointment was made for the following day, September 29, at 4 p. m.

History.—The following history was given: On September 26, three days previous, while he was playing with some beans, he came to his mother and said that he had swallowed one. He was slightly uncomfortable, but his mother was not alarmed

* Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

1. Medical Record, Feb. 11, 1905.
2. Laryngoscope, December, 1905, p. 944.

about him. In the afternoon he became somewhat blue and complained of pain behind the upper part of the sternum. The physician who was called advised removal to the hospital.

Examination.—The examination made is in the hospital records as follows, under date of September 28, two days after the accident: "All other parts are normal, but the lungs are seriously involved. The expansion is more marked on the left and the left chest is more prominent. The right percussion note is dull, on the left hyper-resonant. Auscultation sound on left loud and vesicular breathing lowered and bronchial on the right. Dulness is marked over the lower portion of the right chest, and all the evidence of occlusion of the right bronchus."

Operation.—Direct bronchoscopy under chloroform narcosis was attempted, but soon desisted, because of the very small size of the larynx. Dr. McWilliams then deftly performed tracheotomy. The foreign body was seen at the end of the brnochoscopic tube with the Killian lamp. The bean was removed with Dr. Yankauer's assistance. It was macerated and I removed it in three pieces. Dr. Northrup, who was present, examined the chest and noted the remarkable rapidity with which the lung cleared up on the removal of the obstruction. The patient was exceedingly restless during the night, respirations grew more and more rapid, the pulse weakened, and, at 8:10 a. m., September 30, he died.

CASE 4.—An adult woman who had inhaled pieces of turkey bone five months previously, was under the care of Dr. Charles A. Elsberg. The case is of interest in that the diagnosis was made by clinicians originally and that one well-known authority opposed operation.

Operation.—The patient suffered so much from violent spasms of coughing that she begged for relief. Direct bronchoscopy was not attempted. I was present at the operation. Tracheotomy was done, a large endoscopic tube introduced, the Killian light thrown in and several pieces of bone were removed with alligator forceps. Recovery followed.

I have the consent of the operating surgeon to add the above case to the list of my bronchoscopic experiences.

CASE 5.—*History.*—F. M., aged 9, schoolboy, living in an adjacent city, was brought to my office on April 14, 1906, with the following history: On Nov. 9, 1905, he had procured a piece of brass in a prize package which is made for the express purpose of putting over a tooth, that the child may startle other children by showing "a gold mounted tooth." A counterpart, which was shown me, had a piece of brass about three-fourths of an inch long attached to the base of a cap-shaped piece. While having this in his mouth the child inspired it and cough and dyspnea set in promptly. With this history several physicians had seen the patient but none could satisfy himself that a foreign body was present.

The dyspnea soon ceased and attacks of coughing at intervals remained. There would be rest for a time and then a most violent spasm of coughing would last unceasingly for an hour. Of late daily chills occurred, the patient was emaciated and feeble; no abnormality was found in the nose or throat; on the right side there was marked retraction of the lower border of the right lung and a whistling sound on expiration over the right bronchus. The opinion was given that there was a foreign body in the right bronchus.

Operation.—He was taken to the *x*-ray department of the Mt. Sinai Hospital and with the fluoroscope I distinctly saw the body. On April 22, 1906, he was admitted as my patient in the Mt. Sinai Hospital. On April 23, under chloroform anesthesia, several attempts were made at direct bronchoscopy, the tube finally entering. The foreign body was not visible, so I promptly did a low tracheotomy. While the assistants held the trachea apart with long silk sutures a much wider tube was introduced, the foreign body was seen in the right bronchus and removed.

On the fifth day, the patient having breathed well twenty-four hours with the tracheal tube *in situ*, corked up, the tube was removed, and on the eighth day he was discharged cured, the foreign body having been five months in his bronchus. The external wound has since entirely healed.

Of these five patients, one died. It will be remembered that in that case the foreign body had been inhaled two days previous to admission of the patient in the hospital, that the foreign body was not only of a solid nature, but of the kind that swells, and that the symptoms of pulmonary obstruction were hourly increasing. Hence, when I was notified of the presence of the foreign body and asked to assist in its removal with the bronchoscope, I feel now that I should have insisted on its immediate removal, and the patient considered as an emergency case. I had not seen the patient to know for myself his condition, as I am not connected with the hospital in question. The attending surgeon stated that at the time of notifying me the patient was in a fairly comfortable condition and it seemed as if he could well wait the customary operating hour of the next day. While the result might have been the same, its early removal would have increased the chances for recovery.

As an added lesson in the study of this comparatively recent subject, the following conclusions may be given:

1. Certain bodies may be left *in situ* for some time without producing symptoms immediately dangerous to life.

2. The presence of a foreign body of a solid nature or one that has a tendency to swell, occluding the entrance of air into the lung below it and producing symptoms that gradually become more severe, should be looked on as constituting an emergency case to be operated on at once. Indeed, we should anticipate the symptoms, as was done in Case 1, in which I insisted on immediate operation and in which the orange seed was removed within three hours of its inhalation. In this case the parents were for delay, as the cyanosis had disappeared, but I insisted on its immediate removal.

DIAGNOSIS.

Regarding the question of diagnosis: With the urgent symptoms that are present and the direct statement of the patient or witness to the accident, the diagnosis is readily made. Without immediate symptoms one would suppose a foreign body had entered the esophagus. With metallic substances the Roentgen ray is apt to be our main dependence, yet, in Case 2, the foreign body, a glass-headed pin, was not seen. Most careful auscultation will, however, aid materially. In the case of solid bodies, the absence of breathing below it, with dulness and retraction of the side will be noted. In bodies that are not entirely obstructive a musical sound on the expiratory act is heard, as was shown to be the case in Cases 2 and 5.

TREATMENT.

The diagnosis having been established, we must decide as to the manner of removal. Unless there is some reason of great importance for delay, operation should be undertaken early, as in the fewest instances may we expect the substances to be coughed up. As before stated, the operation may be one requiring prompt attention in order to save life, others may wait our own convenience as to time.

Should attempts at direct bronchoscopy be made in these cases? When we consider that the majority of these are in young children with very small laryngeal orifices, the length of time a direct bronchoscopy requires, and the possibility of injury to the laryngeal membrane, we feel that a tracheotomy is far preferable. The operation is quickly done, a much larger tube may be inserted in the trachea than could be inserted in the

larynx (in Dr. Elsberg's two cases and one of my own, the largest endoscopic tube was used) and, furthermore, we are so much nearer the foreign body for manipulation. I should, therefore, answer the question that tracheotomy with subsequent removal is by far the best method in these cases; and objection to it can not be maintained. It is a time saver. In one instance in which no haste was necessary, I timed the operator and it took 1½ minutes until the trachea was opened and ready for the tube. In the after-treatment it will be necessary to keep the temperature of the room warm, to prevent, to a great degree, the danger of pneumonia.

Special care and nursing is required for a few days, and although none of these patients was possessed of means, yet they could and did secure the needed attention. As these remarks are intended for the presentation of personal experience, no general reference to the literature of the subject is made, nor is such necessary, as the subject has been so well presented with a reference of 50 recent cases in a paper by Thomas A. Clayton.[3]

CONCLUSIONS.

As a result of my experience, I conclude:

1. The diagnosis may often be fully established by auscultation and percussion and the use of Roentgen rays may not always be depended on.
2. Solid bodies producing occlusion should be operated on immediately.
3. Tracheotomy affords by far the best chance for the patient.
4. The public, as well as the profession, is in great debt to Professor Killian for his valuable instruments and his work on "Bronchoscopy," resulting in the saving of many lives that otherwise would have been lost.

25 East Seventy-seventh Street.

(*Continued on page 1586.*)

DIAGNOSIS OF TUBERCULOSIS IN INFANTS AND CHILDREN.*

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The cause of tuberculosis is the tubercle bacilli. It is an infectious disease. About 8 per cent. of all children who die show at autopsy evidences of tuberculosis. Tuberculosis in one or in both parents is a distinctly predisposing cause, and poor hygiene, improper food or, in fact, any influence of a debilitating nature predisposes to the disease. Bronchopneumonia, pleurisy, repeated attacks of bronchitis or chronic throat conditions and the acute infectious diseases, pertussis, measles and influenza, all predispose the child to subsequent tubercular infection.

Tuberculosis is common in children over 4 months of age, but congenital tuberculosis is rare and the number of cases reported of children who die of tuberculosis before the fourth month are probably many of them congenital. The infection may enter through the respiratory tract, the digestive tract and the skin. The latter is very rare. In a large majority of cases, probably 90 per cent., infection takes place through the respiratory tract. Diseases of mucous membranes, such as one sees in chronic throat conditions in children, especially enlarged tonsils, increase the possibilities of a tuberculous infection, as a healthy mucous membrane offers more resistance to the passage through it of the tubercle bacillus than a mucous membrane in a diseased condition. The tubercle bacillus is usually carried by air containing the tubercle of dried sputum. After penetrating the mucous membrane, the bacilli enter the lymphatic ducts and are arrested in their progress by the lymphatic glands. These glands may be those of the neck, trachea or larger bronchi. As a result of this infection the glands undergo acute inflammation and caseation or the process may be checked and encapsulation takes place, the disease being arrested permanently or perhaps only for a time. A great deal depends on the child's resistance, the process being much more likely to be checked by the lymphatic glands in a strong and vigorous child than in one which is frail and delicate. The initial lesion may be in the walls of the smaller bronchi, alveoli, or in the connective tissue of the lung.

As a diseased intestinal mucous membrane offers less resistance than does a healthy one to the passage of the tubercle bacillus, chronic intestinal disease or intestinal ulceration increases the liability of infection of the mesenteric glands. In infancy meningitis is often associated with tuberculosis in some other part of the body, and in the first two years of life tuberculosis shows itself especially in the bronchial lymph glands, lungs and brain. It is very important to appreciate the fact that tuberculosis of the lymph glands is a prominent characteristic of the disease in early infancy and childhood, and that this glandular tuberculosis may remain dormant months or years, but in the end may set up a rapidly developing tuberculosis. After the third year tuberculosis of the mesenteric glands, the peritoneum and the intestines is more commonly seen than in earlier life, but during the entire period of infancy and childhood the lungs are almost invariably involved in all cases of moderately advanced tuberculosis.

The most common form of tuberculosis is a double tuberculous bronchopneumonia, a disease running a more rapid course in infants than in older children. In this tuberculous bronchopneumonia the breaking down of the lungs and the formation of cavities is very common, and the younger the child the more rapid is this process. Simple bronchopneumonia is usually also present in these lungs. In a very large majority of cases the bronchial glands and the glands at the root of the lung are involved, one or more of them perhaps having undergone caseation, possibly ulcerating into a bronchus and rapidly spreading the disease to the surrounding lung.

The clinical picture that one meets with in tuberculosis in infancy and childhood presents many curious features often rendering an early diagnosis difficult and at times well-nigh impossible. For the sake of convenience I will describe a chronic, a subacute and an acute form of pulmonary tuberculosis:

Chronic Pulmonary Tuberculosis.—This is a form in which we have the lung bound down with pleural adhesions, portions of the lung the seat of recent tuberculous infection, other portions showing the typical evidences of old tuberculous disease, dense fibrous tissue surrounding small or large cavities or caseous masses, enlarged bronchial glands with perhaps calcification or caseation. In these cases the younger the child the less frequently do we find a complicating tuberculous enteritis. This is probably due to the fact that tuberculous enteritis in the large majority of cases is secondary in

* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.
3. American Medicine, March 17, 1906.

its nature, usually following tuberculosis of some part of the respiratory tract. Pulmonary tuberculosis in infants runs a more rapid course than in older children, hence less time is given for secondary tuberculous infection of the intestine. Abscess formation in the infant is usually present at death, but has not advanced as a rule as far as we find to be the case in older children; consequently, the amount of tuberculous material coughed up and swallowed is probably distinctly less in infants than in older children. Disturbances of digestion are very common in tuberculous infants, but they are usually dependent on the depressed vitality of the baby and its weakened digestive powers and not on tuberculous disease.

The history of these cases is often as follows: First, there is primary bronchopneumonia which runs a slow course and ends in an incomplete cure. The cough does not entirely disappear, the child's health and strength does not completely return. Some broncho-vesicular breathing and impairment of resonance remains. A second attack of bronchopneumonia occurs, and again the recovery is incomplete or the child develops measles, pertussis or severe influenza, which is followed by a rapid increase in the tuberculous symptoms. The earliest evidences of lung involvement are usually found in the upper middle part of the lung, either in front, the upper axilla or in the interscapular region; that is, in the upper portion of the lung, but not as in adults at the apex of the lung, showing clearly that the infection occurs usually through the bronchial glands at the root of the lung. The disease runs a slow course. At death cavities are usually present and are more easily recognized during life in older children than in infants. This is due to the fact that in infants cavity formation is often deep seated in the lung, surrounded by a zone of tuberculous and non-tuberculous pneumonia, and that the cavities are less likely to be walled off by dense fibrous tissue. In fact, after the eighth year of life, the disease in children approaches closely the adult type. Toward the end of life the pulmonary symptoms are easily recognized and the secondary evidences of tuberculosis in the brain, glands and peritoneum are usually distinct.

Subacute Cases.—The disease in these cases runs a more rapid course, the ordinary duration being from two to six months. The pulmonary symptoms appear early in the disease, perhaps in the very beginning of the illness, and the symptoms at this stage of the disease are those of an ordinary attack of bronchitis or of a mild bronchopneumonia. An attack of pertussis or measles in which the child recovers imperfectly, the cough persisting, the temperature remaining above normal and the child failing to regain in the proper time its former health, should make one suspicious of the development of a possible previous latent tuberculosis.

In these subacute cases, while the pulmonary symptoms are often present from the beginning of the illness, cases are not infrequent in which a gradual loss of weight and strength precede for a month or six weeks the development of the lung symptoms, or at least during this month or six weeks the cough is comparatively slight and spasmodic in type, resembling more or less the cough of pertussis.

In these cases the fever usually rises, the pulmonary symptoms progress, the cough increases in amount and the child continually loses in strength and weight, respiration becomes more rapid, the pulse increases in frequency and indigestion, resulting from the child's weakened physical condition, helps still further to reduce its vitality. Hemoptysis is rare, and the severe diarrhea with abdominal pain and tenderness indicating a high degree of tuberculous enteritis is also rare. Dropsy is occasionally met with, and when present usually indicates that the child's death is not far distant. Toward the latter part of the disease anemia becomes marked and nephritis, due to amyloid degeneration of the kidneys, may develop. The following case seen in consultation February 15, 1906, with Dr. Waldo F. Sawyer, Vineland, N. J., represents this type of illness:

CASE 1.—Oscar K., aged 5, was breast-fed until 11 months. He had pertussis at the age of 3 months and measles at the age of 1 year. He made good recovery from both. There was a maternal family history of tuberculosis.

Examination.—In the past three and one-half months he has lost 11 pounds; present weight, 29 pounds. He coughs very little except after eating. The cough is distinctly spasmodic, resembling pertussis. There is continued fever; present temperature, 101 F. There is marked enlargement of cervical glands and impairment of resonance in upper portion of right axilla with broncho-vesicular breathing. There are physicial signs of bronchitis in left lung.

Diagnosis.—Subacute tuberculosis, infection through respiratory tract, tuberculosis of the lymphatics of the neck, of the glands at the root of the lung, subacute tuberculous bronchopneumonia of both lungs.

Acute Cases.—The acute cases show tuberculous deposits scattered over and in both lungs and miliary tubercles in both lungs, and in addition a simple bronchopneumonia. Symptoms in these cases closely resemble symptoms of ordinary bronchopneumonia non-tuberculous in type. The fever is irregular, 100 to 104 F., the cough gradually increases in severity, the pulse is rapid, there is distinct dyspnea, the child rapidly loses in weight and strength and dies with all the evidences of steadily increasing weakness, and progressive development of the lung symptoms or perhaps death is due to a tuberculous meningitis. The lungs show a diffused bronchopneumonia with scattered areas of consolidation.

The following case also shows the difficulties often met with in arriving at a positive diagnosis of tuberculosis:

CASE 2.—On Feb. 18, 1906, I saw in consultation with Dr. Lowenburg the child of Dr. C. Patient was a boy, aged 2, well developed and had always been in good health. His only trouble was chronic constipation, from which he had suffered almost continuously since birth. For a month before I saw him he had continued fever of a mild type except during the ten days preceding my visit, when the temperature had reached 105 daily, with 103 as the minimum.

Examination.—His mind was clear, his pupils normal, he complained of no headache, had a slight cough, his tongue was coated, he took his nourishment fairly well. Bowels, as usual, were constipated. Lymphatics of neck and inguinal lymphatics were enlarged, upper middle portion of left lung anteriorly showed an area of impaired resonance about as large as a silver half-dollar. His breathing over this area was harsh. A blood examination showed no evidences of malarial organisms. A Widal taken three days previously was negative. Leucocytosis, 20,000.

Diagnosis.—It was difficult to make a positive diagnosis. Typhoid fever was excluded by second Widal. Autointoxication of gastrointestinal origin seemed hardly probable in view of the fact that the boy had always been constipated. Malarial fever was excluded and the diagnosis seemed to rest between a tuberculosis and a central pneumonia. Forty-eight hours later the temperature dropped to normal and remained normal; the drop of temperature being preceded a few hours by a fall in the leucocytosis to 7,000, apparently confirming the diagnosis of pneumonia.

It is often extremely difficult in the earlier stages and in the latent period of tuberculosis to collect sufficient evidence on which to base a positive diagnosis. Each case must be considered and studied separately. If the child is strong tuberculosis is not so likely as in one that has been frail and delicate. The possibility or probability of infection should be considered. Has the child lived in hygienic or unhygienic surroundings? Has its life been such as to expose it often to tuberculous infection? Has it lived in a house where a previous case of tuberculosis existed? Have there been any previous signs or even suspicions that the child has been tuberculous, as shown by its lymphatics, hip-joint disease and tedious convalescence from any illness as typhoid, pneumonia, pertussis or measles?

Protracted cases of bronchopneumonia of the subacute type followed perhaps by chronic inflammation of the connective tissue of the lung, may be difficult to diagnose from cases of subacute tuberculous bronchopneumonia. In a tuberculous form the lung symptoms may not be present from the onset of the disease, and wasting and loss of strength are usually more marked than in simple bronchopneumonia. When bronchopneumonia shows a tendency to persist beyond the usual period the possibility of its being tuberculous should be considered, and if the process is tuberculous, the fever, cough and emaciation are usually progressive. Bronchopneumonia is more often found at the lower back part of the lungs, tuberculosis at the upper portion.

Leucocytosis is usually absent in tuberculosis, unless we have a case of mixed infection. The leucocytes are, however, relatively high in infants. Digestive leucocytosis must also be taken into consideration. There is leucocytosis commonly in septic conditions, diphtheria, pneumonia, and this is of importance in summing up the evidence against the case being tuberculous. Leucopenia is commonly seen in tuberculosis and malaria, also in uncomplicated cases of typhoid fever, and if the diseases in which the number of white cells is usually diminished can be excluded with the exception of tuberculosis, it may assist in deciding the case to be of a tuberculous character. Blood cultures are often of distinct advantage in a doubtful case; 5 c.c. of blood should be secured and agar cultures made, preferably 1 c.c. of blood in five different agar tubes. This may, of course, fail, but, on the other hand, it may be of advantage in establishing a differential diagnosis from pneumonia or typhoid by showing the presence of the pneumococcus or the typhoid bacillus.

Chlorosis often presents a picture resembling closely tuberculosis of the lungs and lymphatics. The anemia may be present in a marked degree early in the tuberculosis; in fact, before the lungs or glandular symptoms are observed. According to Hayem, a true chlorosis may co-exist with a latent tuberculosis. The finding of tubercle bacilli in the sputum or stools, fever, progressive loss in weight, and a family history of tuberculosis, with perhaps the history of exposure to tuberculous infection, may enable one to make the diagnosis. Occasionally it is almost impossible to decide whether or not a tuberculous element is present and producing the anemia.

Inoculation experiments of glandular substance are often of aid in a differential diagnosis, and in the more chronic types of the disease may decide the tuberculous nature of the illness. The inflammation and caseation of a few tuberculous mesenteric glands may be occasionally shown by local tenderness or pain on pressure.

Again, tuberculous infection of the cervical lymph glands is very uncommon under 3 years of age. In fact, the younger the child the less likely are the enlarged lymphatics of the neck to be tuberculous. To this rule, however, there are exceptions, a case of tuberculous cervical adenitis in an infant of four months being recently reported by Dr. L. E. LaFetra.

In a doubtful case presenting skin eruptions, the tubercle bacillus has been recovered from the eruption, as in a case recently reported by Dr. Irving Snow of Buffalo. The failure of young children to expectorate, as they swallow the expectoration as soon as it is coughed into the pharynx, makes the sputum in these cases extremly difficult to obtain. This can be overcome by passing a soft rubber tube well in the esophagus and examining the adherent mucus for tubercle bacilli.

The examination of the fluid removed by lumbar puncture will often aid in the establishment of a diagnosis. I have used tuberculin very little, as an irregular fever, not infrequently seen in young children, renders its use of doubtful value in many cases.

In closing, I do not wish to be understood to be put on record as implying that the diagnosis of tuberculosis is as a rule difficult in the advanced stages of the disease, but this paper is presented because I am often asked to decide as to the presence or absence of tuberculosis when the symptoms are vague and indefinite. In these cases the diagnosis is often obscure, and I hope the discussion of this paper may perhaps throw some light on the differential diagnosis in children in whom the symptoms of tuberculosis are vague and indefinite.

(*Continued on page 1586.*)

Special Article

CAP AND GOWN IN MOLIÈRE.

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In the "*Malade Imaginaire*," Béralde, who is the mouthpiece of Molière, says to Argan, the imaginary invalid: "Yes, you have but to speak with a gown and cap and any gibberish becomes learning, and any nonsense sense"; and Toinette, the rollicking maid-servant, hastens to add: "There, sir, if it were only for your beard, that goes a great way already, for the beard makes more than half the physician." Béralde is attempting to persuade his brother Argan to become a physician in order to cure him of his infatuation for physic and the physician. But Argan, simple minded and credulous, imagines that in order to be a doctor it is necessary "to study, to know Latin, to understand the diseases and the remedies to apply," an idea that Béralde ridicules, assuring him that he already knows as much as the average physician, without ever having studied medicine, and that cap and gown take the place of learning. Argan finally yields, and he is made a doctor by a friendly faculty, after a farcical examination for which he is coached.

I had always regarded the famous scene of the reception of the Imaginary Invalid as pure burlesque, and also as a gross libel on the medical profession of the XVII century, until Reynaud's "*Les Médecins au temps de Molière*" fell into my hands. Reynaud informs us that the famous scene is by no means pure fiction, that the France of Molière abounded with friendly faculties, of whom a diploma, carrying with it the right to practice, might be had almost for the asking; and, still worse, that Montpellier, one of the oldest and most renowned faculties of Europe, was scarcely more than a diploma mill. It was a common saying at Paris, where the degree of M.D. could only be obtained by a long course of study and a term of actual experience, that to receive the cap and gown at Montpellier,

you devoted to the study of medicine "about the time it takes young birds to get their feathers." It also appears that the graduates of that faculty set up in practice at Paris, where they were arrested and prosecuted for illegal practice. A battle royal between the two faculties followed, which ran through several decades and compared to which our modern struggles with the diploma mills and their output sinks into insignificance. In fact, a parallel for the virulence and ferocity that characterized this professional struggle of the XVII century can be found only in the religious fanaticism of the period. In two respects, the famous controversy resembles that precipitated by modern boards of medical examiners as soon as they undertake to enforce the law—the Paris faculty was supreme within that jurisdiction; and in addition to invoking the law, which required of every practitioner an examination before the faculty after a full course of instruction, the faculty saw fit to go behind the foreign or provincial diploma.

Montpellier and the accused invoked the famous *ubique gentium*, the right to practice anywhere on earth conferred by her diploma and derived from the Papacy, and answered the charge of fraud in the procurement of her diploma by arrogantly pointing to her announcements. But, despite the protest and outcry of the proud alma mater, the fact remained that in numerous instances the cathedral bells had announced the elevation of an ignoramus to the degree of doctor. There had been an examination, but it was as farcical as that of the *Malade Imaginaire*, or, like Argan, the candidate had been coached for the occasion. The president of the faculty, a man of learning and repute, had seated the newly-made doctor alongside of him, had bestowed on him the traditional ring, the golden belt and the red gown lined with ermine, and given him a light blow on the cheek, in token that he was henceforth a free man, which Molière, with his genius for satire, turned into a license to purge, inject, bleed, cut and kill anywhere on earth. Yet, as a matter of fact, all these honors had been conferred on an untutored and unlearned person. The worst feature of the whole farce was that the president, in his address of welcome, following the time-honored custom, had insisted on the importance of admitting to the profession only learned and worthy persons.

In his first manuscript of *Le Malade Imaginaire*, Molière had called the candidate worthy alumnus of Montpellier, but finally laid the scene of the reception nowhere. It properly belonged to no age nor country, no more than did the imaginary invalid or Monsieur Purgon, for the friendly faculty is immortal. Molière might just as well have placed the scene in Germany, for instance, where they had the *doctores bullotti*, doctors by the grace of the authorities, where in more than one university the student might live at the Brocken or Auerbach's Cellar and, provided he had paid the fees, receive the coveted M.D. He did not go through on the skirts of Marguerite, but on the long training gown of the rector magnificus.

But what mattered it how the title had been procured or how ignorant the recipient might be. The cap and gown were symbols of learning and skill and, provided he spoke with authority and assurance, all men had confidence in the wearer; besides, had not a learned faculty solemnly certified to his learning and ability? We have in Goethe the picture of Faust disgusted with the barren erudition of the schools discarding his academic gown, and Mephistopheles attired in the livery of the master, receiving the student in his study. Picturesque, but unreal scene! The Faust of Goethe is Goethe himself, the philosopher who breathes the spirit of the XVIII century, not the XVI. The real Faust did not resign, nor did Mephisto or Wagner succeed him. He did not despise the learning of the schools, nor did every midnight find him pouring over dusty manuscripts or the sacred writings, as in the drama of Goethe. On the contrary, many an evening found him with the students at Auerbach's Cellar, and Easter morning saw him on his way to church. The respect of the multitude is not treated with contempt, as in the tragedy. Faust wore the academic cap and gown as proudly as ever knight bore sword. Subject of an omnipotent prince, he obeyed his behests, and when some rich or powerful patron solicited, the coveted sheepskin issued, armed with the academic seal and the signatures of the whole body of the faculty.

The reception of Argan reads like a chapter from the history of medical education in the United States prior to the eighties, when the state bowed to the alma mater and honored her credentials without examination. The friendly faculty is directly responsible for the existence of boards of examiners, and these boards are responsible for the death of hundreds of diploma mills. One has only to consult "Polk's Medical Directory" for 1902 in order to see their tombs. If the state medical societies were to write the epitaph, it would doubtless be *requiescat in pace*. Their alumni make it *resurgam*. They keep the memory of the dead alma mater green and at every session of the legislature their prayers for her resurrection are heard. The legislature has the power to raise the dead, but the power is invoked in vain.

Thanks to boards of examiners, it is necessary in the United States to study in order to be a doctor. The state has not the monopoly of medical education as it should have, and as it has in the country of Molière. The faculties still confer degrees but the state alone grants the license, and only after an examination before its own sworn servants. Cap and gown are still recognized, but they have lost their ancient magic. The state looks behind the trappings for the man, and rightly so, for what assurance have we but the license that cap and gown are not borrowed livery, or the gift of a friendly faculty, or of a too indulgent mother. We, too, have our Montpelliers.

Medicine, physician and patient, occupy easily the first place in the works of Molière. If one will visit his neglected gallery —I say neglected, for who to-day reads *Le Malade Imaginaire*, *Tartuffe* or *Le Misanthrope*— one will see *Le Médecin Volant*, an ignorant valet, attired in the long-trailing gown and the pointed cap of the then physician, duping a wealthy bourgeois; *Le Médecin Malgré Lui*, a drunken woodchopper and wifebeater, whose only license was a beating, and his dupe, another bourgeois even more credulous than his brother. Alongside of the immortal Tartuffe, hypocrite and impostor, are seen Tomès, Macroton, Desfonandres and Bakis, the four physicians of *L'Amour Médecin*. They disagree and quarrel. Further on, doctors and apothecaries, syringe in hand, pursue Monsieur de Pourceaugnac, who does not care a straw for physic and refuses to be purged and bled. Next to the proud figure of the Misanthrope appears the equally haughty Monsieur Purgon, who menaces the trembling Imaginary Invalid with a host of diseases, abandoning him to the "feculence of his humors and the corruption of his blood," because he has had the audacity to refuse to permit Monsieur Fleurant, the apothecary, to administer the enema prepared by Purgon's own hands, which was to evacuate and expel all the peccant humors. The gallery ends with *Le Malade Imaginaire*, the masterpiece of humor and satire, in which the author-philosopher, already sick unto death from an aneurism, seems to gather for a final onslaught on the physician and his art, all the sharp pointed shafts, which, from his early youth, he had been continually hurling at both.

The Imaginary Invalid is also the last of the comedies to be acted by the author-actor. Molière was playing the part of Argan in the fifty-second year of his age, had spoken the famous Juro, the oath of allegiance to the faculty, when he was unable to proceed, and was shortly afterward carried to his luxurious abode, a dying man. The "Rival Doctors" and the "Doctor in Love," works of his early youth, are unfortunately lost. We are denied the pleasure of seeing the doctor make love. Molière doubtless made him as ridiculous as young Thomas Diaphorus, who presents Angelique, his intended, with his thesis against the circulators, and breaks down in the middle of a studied and absurd compliment to her step-mother. We probably have the "Rival Doctors" in the quarreling physicians of *L'Amour Médecin*.

Molière believed he had a mission to perform on earth, the mission being that of the comedy; in his words, to correct the vices and the follies of mankind. One of these follies was our faith in the physician and the art of medicine. That art, declares Béralde, is an amusing mummery. Béralde is Molière. Wherever in the comedies contempt is expressed for the physician and his art, and the passages abound, it is the contempt of Molière. The Shepherdess in the *Malade Imaginaire* sings

the philosophy of France's first literary genius and the world's greatest writer of comedies:

Ignorant doctors,
Your highest knowledge is but pure chimera.
Those uncertain remedies of which the simple people
Think that you know the admirable virtue,
Cannot cure the ills I feel;
And all your gibberish can be received
Only by an Imaginary Invalid.
Your highest knowledge is but pure chimera,
Vain and little informed doctors, etc.
Strange and unnatural refrain for a shepherdess!

It is a common mistake to believe that Molière's satire is directed against the quacks. Molière portrays but one physician, the member of the faculty. Call him the licensed physician if you wish. The word charlatan is not to be found in his pages, unless it is the *opérateur* of the Pont Neuf, who sells orvietan. One is very apt to think the thesis of young Doctor Diaphorus in the *Malade Imaginaire* is aimed at the quacks. But *circulateur* does not signify itinerant, but circulator, i. e., one who believes in the circulation of the blood. That young gentleman, like every member of the faculty, took an oath never to consult with an unlicensed practitioner and to give him no quarter generally. In reality, like his fellows, he left the task of the prosecution to the strenuous dean of the faculty, contenting himself with writing a thesis against the partisans of Harvey, whom he regarded as fully as pernicious to mankind as the quack. The physician of Molière is a pedant, not a charlatan.

Van Laun, one of Molière's translators, has it that no two of his physicians are exactly alike. It is difficult to see wherein they differ, for all are insufferable pedants, vain and ignorant pretenders, and all speak gibberish and nonsense. It is the gibberish of the period, the nonsense of Galen and the humoral theory of disease.

The reason for Molière's deep aversion and bitter antipathy for the profession has often been sought. Reynaud advances the hypothesis that the author of the *Malade Imaginaire* was the original of that character, and that he bore the profession a grudge because of its failure to cure Molière. I confess I cannot reconcile myself to the idea of Molière being a hypochondriac. Antipathy to physic is natural to many men. My own father, college professor, with two sons in the profession, carried the prejudice to the grave, dying at fifty-two of pneumonia, and refusing to the last to have a physician or to take any drug. Montaigne's antipathy is as deep as Molière's, and he claimed it was hereditary. But some little suspicion attaches to both of these great writers. Montaigne, in the throes of nephritic colic, calls a physician, but merely for his agreeable conversation, he claims. Molière, when ill, sends for Mauvillain, but writes Louis XIV that he did not take his remedies and recovered. While it might not be fair to accuse the author of the essays of suffering himself to be copiously bled or of swallowing rat's excrement for his stone, or Molière of being the slave of Purgon and Fleurant, or of permitting himself to be prostrated with Mauvillain's antimonial wine; yet, after all, is not the philosopher who, when seriously ill, sends for the esculap quite as suspicious as the sceptic who, when in extremis, calls a spiritual adviser?

The philosophic reason for the hostility of Molière is to be found, I believe, in the dialogue of Béralde and Argan, which covers an entire scene and is a complete disquisition on the subject of medicine. In this scene, Béralde (and Béralde is Molière), pretends that it is ridiculous for one man to undertake to cure another; and, when Argan inquires the reason for this singular opinion, Béralde replies: "For the reason, brother, that the springs of our machinery are a mystery, of which, up to the present, men can see nothing; and that Nature has placed too thick a veil before our eyes for our knowing anything about it." This then is the reason why, in the opinion of the author, "medicine is an amusing mummery, and the whole excellence of the physician's art consists in a pompous gibberish, in a specious verbiage which gives you words instead of reasons and promises instead of effects." This is why Argan and the mock physicians of Molière, ignorant valets and clumsy louts, are, in his opinion, quite as learned and skillful as the Purgons and the Diaphoruses.

Almost any modern physician will admit that it is ridiculous for one who is ignorant of the fundamental principles of physiology to undertake to cure another; in fact, that it is not only ridiculous, but criminal as well. The error of Molière was not in holding up to ridicule the physician of his century, but in believing that Nature had forever hidden from human eyes the springs of our existence. He believed, and indeed was always saying, that Nature was the great healer and that in sickness it was necessary to do nothing but to keep quiet. Our natural impatience, our morbid fear of pain, disease and death, made us the natural dupes of the physician. Excellent advice, perhaps, for his own time. Were it not for the universal ignorance of the time and the evident good faith of the then physicians, one might be tempted to assert that it would have been better for France and all the worse for her enemies had Louis XIV banished the bleeders and the antimonialists of his kingdom instead of the Huguenots.

Molière believed that he had portrayed the physician of all ages. In reality he painted only the physician of the XVII century, and French at that. France had no Harvey, no Sydenham, and Molière did not recognize the revolution already begun by Harvey before he had penned his first line, revolution that was destined to overthrow Galen and the faculty, probe the secrets of Nature and thus make it possible for one man to cure another, which was to strip the physician of his ridiculous attire, rid him of his barren pedantry, his pompous gibberish and specious verbiage. And yet, there is little doubt but that Molière aided this same revolution by holding up to ridicule a system of medicine based on a primitive and absurd anatomy, physiology and pathology.

That you have only to speak with a gown and cap, and any gibberish becomes learning and any nonsense sense, is a truth as old as the art of medicine itself, as ancient as man himself, and probably as eternal. No author has illustrated this truth half so well as Molière. It furnishes the theme of two delightful little farces, *Le Médecin Volant* and *Le Médecin Malgré Lui*, and of one comedy, *L'Amour Médecin*.

In the *Médecin Volant*, the patient is a young girl who, in order to escape a marriage to the man of her father's choice, feigns illness. The lover, to gain access to the closely-guarded object of his passion, dresses up his valet, a clumsy ignorant lout, in the conventional attire of the physician, and the mock doctor is introduced to the credulous parent as a man of extraordinary learning and skill. Sganarelle, the "Flying Physician," like all charlatans, blows his horn loudly. He is "the greatest, ablest and most learned physician in the whole vegetable, sensitive and mineral faculty, and possesses peculiar talents and secrets beyond the ken of other physicians, who, compared with himself, are but abortions of doctors"; and he proceeds to impress the father of the patient with his learning. Here is a specimen of the gibberish that passes for learning in the latter's eyes, because it comes from one who wears the cap and gown.

"Salamalec, salamalec. Rodriquez, have you a heart?
Signor, si, signor, no. *Per omnia secula seculorum.*"

Sganarelle cannot even write, and he betrays his ignorance when, desiring to write a prescription, he inquires if any one present can write. But his ready wit, so characteristic of the successful charlatan, and the utter blindness of the dupe, saves him; for, seeing his mistake, he feigns hurry and rush of practice. The ruse of the lovers is completely successful. Sganarelle orders plenty of fresh air for Lucinde who, once out of sight of an unsuspecting father, elopes with the man of her choice.

In the course of the comedy, Molière, by a master stroke of satire, introduces a lawyer to Sganarelle and makes him pay his compliment, couched in impeccable Latin and ornamented with the appropriate aphorisms of Hippocrates, to the medical profession and to the fakir who wears its livery. The ass's ears are only too apparent in Sganarelle. The lawyer, however, sees nothing but the professional attire. His friend Gorgibus has extolled the learning of the fakir. But, perhaps after all, the lawyer is not the dupe he appears to be. He may have recognized in the mock physician a possible client. The defense of Sganarelle, arrested for illegal practice, suggests itself. How could he be guilty of practicing medicine when

he had prescribed neither bleeding, nor purgative, nor enema, had written no prescription, prescribed no drug or medicine, but merely a walk in the garden, and fresh air? He had not even exacted a fee, for the money placed in his palm by Gorgibus when it was behind his back was simply a present. No relation of physician and patient had existed, for the illness of Lucinde was feigned. Sganarelle had not violated the medical law, for it was intended only to apply to those who bled and purged their patients or prescribed drugs. Sganarelle had only prescribed a walk in the garden, and fresh air. He was not a physician, but a naturopath. A defense altogether modern, it might be said. In reality, it is as old as Hippocrates and Galen, though probably not so successful with the ancients as with the moderns.

The *Médecin Malgré Lui* is a drunken faggot binder, his only license being the beating he receives at the hand of the lover, who, in order to elude the vigilance of the father of the young girl he wishes to marry, dresses him up in the cap and gown of a physician, and passes him off as a man of skill. Sganarelle, the physician in spite of himself, is superior in intelligence and education, and also in roguery, to his namesake the flying physician. He went as far as the sixth grade at school and once worked for a physician. Géronte, his dupe, is also the superior of the victim of the flying physician.

It is difficult to say in which of the two comedies the fraud is more palpable and the credulity deeper, for, in both, the bounds of credulity seem to be almost exceeded; if, indeed, human credulity has either circumference or center. The coarseness and vulgarity, the gibberish and nonsense of the physician in spite of himself are palpable enough. They *sautent aux yeux*, as the French say; yet he passes for a physician of rare merit. He wears the professional cap and gown and has been introduced to his dupe as a man of renown.

Sganarelle invokes Hippocrates and Galen and has a smattering of Latin, bad as it may be. This last possession is sufficient to stamp him as a prodigy. Lincoln says in one of his letters that, in his youth, if a man who knew a few words of Latin came into his part of the country, the wilds of Kentucky, he was immediately set down as a wizard. Molière makes the country people flock to Sganarelle. In Don Juan, in which the first reference to the subject of medicine occurs, we find Sganarelle, the clownish valet of Don Juan, disguising himself in the attire of a physician, the better to escape his pursuers, and being forced to prescribe for the country folk. What more complete disguise could have been invented than an attire which commanded the respect of all mankind? The valet of Don Juan tells his master that he prescribes the first thing that comes into his head. The Physician in Spite of Himself, consulted by a peasant whose wife is ill with the dropsy, picks up a piece of cheese and gives it to him; and, when the peasant refuses to take it, Sganarelle declares that the cheese is a specific composed of gold, coral, pearls and other precious things, at which the peasant eagerly seizes it. Géronte, the dupe of Sganarelle, the mock physician, swallows any kind of nonsense. The cap and gown of the quack lull his suspicions to sleep. But let us look at the nonsense and the gibberish that pass for reason and sense. Sganarelle begins by citing Hippocrates and Galen, but in the most absurd manner.

Sgan: (In a physician's gown with a very pointed cap) Hippocrates says—that we should both put our hats on.

Géronte: Hippocrates says that?

Sgan: Yes.

Géronte: In which chapter, if you please?

Sgan: In his chapter—on hats.

Géronte: Since Hippocrates says so, we must obey.

Sganarelle discourses and reasons after the fashion of the physicians, but gets terribly mixed in the peccant humors and their exhalations. His pathology is fearfully embarrassed, but he saves himself by taking refuge in a flood of hog Latin. His anatomy is still worse, for he places the heart on the right and the liver on the left; but, when Géronte protests at his singular mistake, Sganarelle calms him with the assurance that *nous avons changé tout cela.* "The heart was formerly on the left, the liver on the right side, but we have changed all that, and we now-a-days practice the medical art on an entirely new system."

Géronte: I did not know that and I pray you pardon my ignorance.

Sganarelle: There is no harm done; and you are not obliged to be so clever as we are.

Sganarelle prescribes no drug, smells no urine, inspects no stool. He gives Lucinde, who feigns dumbness, bread soaked with wine, and, pressed for an explanation by her father, who demands reasons for diagnosis, prognosis and therapeutics, replies:

Sgan.: Do you not see that they give nothing else to parrots, and that, by eating it, they learn to speak.

Géronte: That is true. Oh, the great man! Quick, plenty of bread and wine.

In order to facilitate an elopement, Léandre, the lover, dresses up as an apothecary and, when he regrets that he does not know half a dozen big medical words, Sganarelle insists that the dress is enough and points to his own renown in the neighborhood. Thanks to the cap and gown, the lovers elope.

In the sparkling piece of comedy and satire, *L'Amour Médecin,* the patient is again a young girl kept under lock and key by a doting and credulous father. The mock physician is the suitor himself. Lucinde has fainted repeatedly in the arms of her conniving nurse, who declares that she will not live out the day. Her anxious father sends post-haste for four physicians, who disagree, quarrel and give him but little hope. The lover disguises himself as a physician, gains admittance to the house and diagnoses Lucinde's complaint as the result of a disordered imagination and an inordinate desire for matrimony, a diagnosis eminently satisfactory to her father. The mock physician poses, of course, as a doctor of renown. He cures by means of words, signs, tokens and rings, and promises to cure Lucinde of matrimony on the brain by humoring her imagination, taking her at her foible and making her believe him her suitor, a capital ruse and an immense joke in the eyes of her father. Valère, by means of his clever system of therapeutics, declares his undying love for Lucinde, bestows a ring and actually makes her deluded father send for a notary, before whom a marriage contract is drawn up and signed. Musicians and dancers then appear, for the alleged purpose of dispelling the patient's gloom, in reality, however, to celebrate the nuptials. The chorus sings Molière's contempt for physic. In the midst of the festivities, bride and groom depart, leaving the enraged father to realize how completely duped he has been by the simple device of a physician's cap and gown worn by a clever, but unwelcome, suitor.

Purgon has changed. He no longer, as of yore, speaks gibberish and nonsense, but, knowing the springs of the human machine, is able to diagnose and cure disease; and he no longer wears the long-trailing gown and pointed cap immortalized by Molière. He is still wedded to his profession, but has largely divorced himself from drugs and does his utmost to cure Argan of the habit. Like Molière, his great critic, Purgon now prescribes the comedy, laughter and the sports. But Argan, the imaginary invalid, and Gorgibus and Géronte, the wealthy bourgeois, are forever the same. Despite the prodigious progress of the medical art and the ever widening gulf that separates the licensed practitioner and the fakir, despite the eternal warnings of Purgon, who stands between them and the thousand and one charlatans, professional and lay, who prey on them, like so many harpies, to the ruin of their health and purse, any gibberish still passes in their eyes for learning and any nonsense for sense.

The Sganarelle of Molière speaks with gown and cap. To-day, Sganarelle, even without these trappings, numbers his dupes by the thousands. The dupes of Molière seem to have emigrated to the United States. They are worth millions of dollars annually to the great American "patent-medicine" Trust and its criminal ally, the newspaper.

We need to be delivered from the medical Tartuffe; for, in respect to medicine, the great mass of the people is still as ignorant and credulous as the dupes of Sganarelle. And the remedy is not the comedy, but the sword of the state. It is not sufficient to operate on the minds of men, after the fashion of Molière, Paine, Jefferson and other philosophers. It is necessary to operate on the bodies of the charlatan and his allies. In the immortal comedy of Molière, no amount of

reason or persuasion suffices to deliver Argan from Tartuffe, the religious hypocrite and impostor, who despoils him. It is the virtuous prince, the enemy of fraud, that we need, the heavy hand of the law and the stern face of the magistrate.

Clinical Notes

REPORT OF TWO CASES OF EXOPHTHALMIC GOITER IN MEN.

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CASE 1.—C. M., a man, aged 47; was born in northern Illinois.

History.—His family history contains nothing of special interest. The man is a carpenter and has been a hard worker all his life. He is the father of 14 children, 13 of whom are living. They are all healthy and in good physical condition. The patient has always been of a rather nervous temperament, and says that this condition has been growing worse during the last five years, although he managed to keep up his work until the fall of 1904. During the last few years he has also been troubled with muscular rheumatism in his limbs, badly at times, although this seemed to depend to a great extent on atmospheric conditions. Otherwise he has always been normal both physically and mentally as far as is known.

Examination.—He came under my observation during January, 1905. He said that for some time past he had been "doctoring" for nervousness, but had been steadily growing worse. His weight in January, 1904, was 180 pounds; at the time I examined him first he weighed 111 pounds. He was emaciated in appearance, and his gait was quick and jerky. There was no exophthalmos present, and both lateral lobes of the thyroid gland were so slightly enlarged that they were not noticeable except when the head was thrown back. Vision was normal. Tachycardia was very prominent, the pulse varying between 140 and 160; the arteries of the neck throbbed forcibly and pulsation of the abdominal aorta was also very marked. Capillary pulse could be plainly seen. The tremor in this case was so marked that it was almost impossible for the man to drink without spilling the contents of a cup, although only partly filled. His appetite was exceedingly good, as a usual thing; bowels were slightly constipated. At this time he was complaining of hot flushes and profuse perspiration, especially after retiring for the night. The perspiration was so profuse some nights that in the morning it became necessary to change all the bedding. Expectoration was frequent and frothy; a slight hacking cough was also present. Albumin and sugar were both absent from the urine.

Treatment.—I put him on a solution of ammonia, citrate of iron and sodium bromid, three times a day. I also gave him strychnin gr. ¼, four times a day. Over the goiter itself I used an ointment consisting of red mercuric iodid gr. vi, potassium iodid gr. xxx, olive oil dram i, wool fat (lanolin) ounce i, which was applied freely with friction. A galvanic current was used daily. The above treatment I continued for three weeks, hoping that I could get the man in condition for an operation. At the end of this time his condition was only slightly improved, so I stopped the strychnin and put him on thyroidectin, 5-grain capsules, one capsule three times a day. I also continued the use of the other medicines. An ice-bag was also used over the pericardium night and day. For about a week I noticed no improvement, but at the end of this time slight changes were noticeable. The tachycardia began slowly to disappear, and at the end of about two months his pulse ranged from 95 to 110. The tremor became less noticeable, but never entirely disappeared. The forcible throbbing of the arteries of the neck also disappeared to a great extent. The flushes of heat and profuse perspiration entirely disappeared, although during the last few months they have been present occasionally. The enlarged gland has slowly decreased in size till it no longer can be seen. The thyroidectin was then discontinued and the patient put on general tonics. About July 1 he wanted to go to work again, but on trying it found himself too weak; the fine tremor of his hands was still present. Arrhythmia developed shortly after his being about. Some days he would feel very well and be up around the house, but suddenly his pulse would become irregular and it would be necessary for him to lie down; even then it would be difficult for him to breathe. I again put him on strychnin, iron and digitalis, and after Oct. 1, 1905, he did not complain of the above condition again.

Result.—At present he feels very well so long as he does not work, but as soon as he tries to work he becomes tired and nervous. This condition may entirely disappear in time.

CASE 2.—M., a man, aged 36; family history negative.

Personal History.—There is nothing in his personal history of interest up to the present except that he has always been of a very nervous temperament.

Examination.—I first saw him during the winter of 1905. He appeared to be well nourished, although he claims to have lost considerable flesh during the last few weeks. His pulse averaged 120. Pulsation of the carotids, abdominal aorta and capillaries was present, and he said it was impossible for him to sleep at night because of the hard beating of his heart. The thyroid gland was greatly enlarged and hard. There was no exophthalmos. The von Graefe sign was absent. He had been perspiring profusely of late, and thought this had weakened him considerably. He complained of indigestion a great deal. The urine and blood were negative, as also the abdominal and thoracic organs.

Treatment.—I put him on thyroidectin, gr. xv a day, with strychnin sulphate gr. 1/30, three times a day. His improvement was very rapid and in two months he was able to work as hard as ever.

Result.—The pulse at present is only slightly above normal. The thyroid gland is almost normal in size and the man feels very well indeed. The profuse perspiration has also entirely disappeared, he sleeps well and his appetite is normal.

THE ACCESSORY NASAL SINUSES AND PNEUMOCOCCUS INFECTIONS.

A PRELIMINARY COMMUNICATION.

SAMUEL T. DARLING, M.D.
Pathologist, Ancon Hospital.
ANCON, ISTHMUS OF PANAMA.

This communication contains some of the results of an investigation which is being conducted to determine the relation of inflammations of the accessory nasal sinuses to pneumococcus infections.

Up to this date, July 21, 1906, the accessory sinuses have been examined with regard to this point in 52 autopsies, 37 of which were pneumococcus infections as follows: Lobar pneumonia, 22; acute pericarditis, 1; acute meningitis, 9; pneumococcus septicemia, 5. The remaining 15 cases were controls.

It has been found that 92 per cent. of all pneumococcus infections coming to autopsy show in a very marked degree more or less typical pneumococcus inflammation of one or more of the accessory nasal sinuses. The inflammation is generally intense. It is fibrino-purulent in character, fibrin and mononuclear cells being abundant. Pneumococci are always present and in numbers depending on the duration of the process. A point of great importance is the age of the sinus affection which has been appreciably greater than that of the lung or meningeal lesion.

Ninety-one per cent. of the lobar pneumonia cases showed a sinusitis.

All cases of acute pneumococcus meningitis presented an inflammation of one or more of the sinuses, and in every one the middle ears and mastoid cells were normal.

In the pneumococcus septicemia group 80 per cent. were found to be associated with a sinusitis.

TABLE 1.—PNEUMOCOCCUS INFECTIONS OF THE ACCESSORY NASAL SINUSES.

Number.	Diagnosis.	Date of Autopsy.	Maxillary Sinus. R.	Maxillary Sinus. L.	Ethmoidal Cells. R.	Ethmoidal Cells. L.	Sphenoidal Sinus. R.	Sphenoidal Sinus. L.	Frontal Sinus. R.	Frontal Sinus. L.	Meninges.	Middle Ear and Mastoid Cells.	Lungs.
464.	Lobar pneumonia	July 1.	†	0	†	0	0	0	0	4	Normal	Not examined.	Lobar pneumonia.
468.	Lobar pneumonia	July 3.	†	†	0	0	0	†	0	†	Normal	Normal	Lobar pneumonia.
469.	Lobar pneumonia	July 3.	0	†	0	0	0	0	0	0	Normal	Normal	Lobar pneumonia.
472.	Lobar pneu., compl. parotitis, right	July 4.	†	0	0	0	†	0	0	0	Normal	Normal	Lobar pneumonia.
473.	Lobar pneu., compl. malarial fever, e. a.	July 5.	†	0	**	**	0	0	0	0	Normal	Not examined.	Lobar pneumonia.
476.	Lobar pneumonia	July 7.	0	0	0	0	0	0	0	0	Normal	Not examined.	Lobar pneumonia.
478.	Lobar pneumonia, compl. uncinariasis	July 9.	†	†	0	0	0	0	0	0	Normal	Not examined.	Lobar pneumonia.
480.	Lobar pneumonia	July 11.	0	†	*	*	*	*	*	*	*	*	Lobar pneumonia.
481.	Lobar pneu., compl. malarial fever, e. a.	July 11.	0	0	0	0	0	0	0	0	Normal	Not examined.	Lobar pneumonia.
486.	Lobar pneumonia	July 13.	†	0	0	0	0	0	0	†	Normal	Not examined.	Lobar pneumonia.
487.	Lobar pneumonia	July 13.	†	0	†	†	†	†	0	0	Normal	Not examined.	Lobar pneumonia.
488.	Lobar pneumonia	July 13.	†	†	†	†	†	†	0	0	Normal	Not examined.	Lobar pneumonia.
493.	Lobar pneumonia, dental caries, osteitis, see note	July 16.	†	0	0	0	0	0	0	0	Normal	Not examined.	Lobar pneumonia.
495.	Lobar pneumonia, acute pericarditis	July 17.	†	†	0	0	0	0	0	0	Normal	Not examined.	Lobar pneumonia.
497.	Lobar pneumonia	July 17.	0	0	0	0	†	†	0	0	Normal	Not examined.	Lobar pneumonia.
498.	Lobar pneumonia, aortic insufficiency	July 17.	0	†	0	0	0	0	0	0	Normal	Not examined.	Lobar pneumonia.
499.	Lobar pneumonia	July 18.	†	†	†	†	†	†	0	0	Normal	Not examined.	Lobar pneumonia.
500.	Lobar pneumonia	July 18.	0	0	0	†	0	0	0	0	Normal	Not examined.	Lobar pneumonia.
503.	Lobar pneumonia	July 19.	†	†	†	†	†	†	†	†	Normal	Not examined.	Lobar pneumonia.
504.	Lobar pneumonia	July 19.	†	0	0	0	†	0	0	0	Normal	Not examined.	Lobar pneumonia.
505.	Lobar pneumonia, acute pericarditis	July 19.	0	†	0	0	†	†	0	0	Normal	Not examined.	Lobar pneumonia.
508.	Lobar pneumonia	July 20.	0	†	0	0	0	0	0	0	Normal	Not examined.	Lobar pneumonia.
344.	Acute purulent cerebrospinal Meningitis (pneumococcus)	March 12.	0	†	**	**	**	**	**	**	Meningitis	Normal	Normal.
386.	Acute purulent cerebrospinal meningitis (pneumococcus)	May 3.	†	†	**	**	**	**	**	**	Meningitis	Normal	Bronchopneumonia.
388.	Acute purulent cerebrospinal meningitis (pneumococcus)	May 5.	0	†	**	**	**	**	**	**	Meningitis	Normal	Bronchopneumonia.
406.	Acute purulent cerebrospinal meningitis (pneumococcus)	May 18.	†	†	**	**	**	**	**	**	Meningitis	Normal	Bronchopneumonia.
446.	Acute purulent cerebrospinal meningitis (pneumococcus)	June 17.	†	†	0	0	†	†	0	0	Meningitis	Normal	Bronchopneumonia.
449.	Acute purulent cerebrospinal meningitis (pneumococcus)	June 19.	†	0	0	0	0	0	†	0	Meningitis	Normal	Bronchopneumonia.
461.	Acute purulent cerebrospinal meningitis (pneumococcus)	June 28.	†	†	0	0	†	0	0	0	Meningitis	Normal	Bronchopneumonia.
471.	Acute purulent cerebrospinal meningitis (pneumococcus)	July 4.	†	†	0	0	†	†	†	†	Meningitis	Normal	Bronchopneumonia.
475.	Acute purulent cerebrospinal meningitis (pneumococcus)	July 7.	0	0	0	†	0	0	0	0	Meningitis	Normal	Bronchopneumonia.
506.	Acute fibrino-purulent pericarditis (pneumococcus)	July 19.	†	†	†	†	†	†	†	†	Normal	Not examined.	Bronchopneumonia.
383.	Purulent arthritis, acute pur. meningitis (pneumococcus)	April 29.	†	†	**	**	**	**	**	**	Meningitis	Normal	Normal.
433.	Acute pur. meningitis, acute rachitis (pneumococcus)	June 11.	†	†	0	0	†	†	0	0	Meningitis	Normal	Bronchopneumonia.
433.	Acute pur. meningitis, acute orchitis tonitis (pneumococcus)	June 13.	†	†	0	0	†	†	0	0	Meningitis	Normal	Cirrhosis of lung.
466.	Acute pur. menin., acute pur. arthritis lobar pneu., pleuritis (pneumococcus)	July 2.	†	†	†	†	†	†	†	†	Meningitis	Normal	Lobar pneumonia.
482.	Meningitis, arthritis, endocarditis of tricuspid valve (pneumococcus)	July 11.	0	0	0	0	0	0	0	0	Meningitis	Not examined.	Lobar pneumonia.

The sign † indicates a pneumococcus sinusitis.
The sign 0 indicates a normal sinus.

* Head section not made.
** Not examined.

TABLE 2.—CONDITIONS OBSERVED IN CONTROLS.

Number.	Diagnosis.	Date of Autopsy.	Maxillary Sinus. R.	Maxillary Sinus. L.	Ethmoidal Cells. R.	Ethmoidal Cells. L.	Sphenoidal Sinus. R.	Sphenoidal Sinus. L.	Frontal Sinus. R.	Frontal Sinus. L.	Meninges.	Middle Ear and Mastoid Cells.	Lungs.
470.	Anemia, chronic malaria, purulent arthritis (staphylococcus)	July 3.	0	0	0	0	0	0	0	0	Normal	Not examined.	Bronchopneumonia.
474.	Enterocolitis, anemia, chronic malaria	July 5.	†	†	0	0	0	0	0	†	Normal	Not examined.	Bronchopneumonia.
477.	Amebic dysentery	July 6.	0	0	0	0	0	0	0	0	Normal	Not examined.	Normal.
479.	Malarial fever, e. a.	July 9.	†	†	0	†	0	0	0	†	Normal	Not examined.	Normal.
483.	Anemia bronchopneu., chronic malaria	July 12.	0	0	0	0	0	0	0	0	Normal	Not examined.	Bronchopneumonia.
485.	Epithelioma of tongue	July 13.	0	0	0	0	0	0	0	0	Normal	Not examined.	Normal.
489.	Mastoiditis, suppurative encephalitis	July 14.	0	0	0	0	0	0	0	0	Pachymeningitis	Mastoiditis	Bronchopneumonia.
490.	Malarial fever, e. a.	July 14.	†	†	†	†	†	†	0	0	Normal	Not examined.	Normal.
491.	Amebic dysentery	July 15.	0	0	*	*	*	*	*	*	*	*	Bronchopneumonia.
494.	Bronchopneumonia	July 17.	0	0	0	0	0	0	0	0	Normal	Not examined.	Bronchopneumonia.
496.	Acute nephritis	July 17.	0	0	0	0	0	0	0	0	Normal	Not examined.	Normal.
507.	Malarial fever, e. a.	July 19.	0	0	0	0	0	0	0	0	Normal	Not examined.	Edema.
509.	Typhoid fever	July 20.	†	†	0	†	0	0	0	0	Normal	Not examined.	Capil. bronchitis.
510.	Chronic dysentery	July 21.	0	0	0	0	0	0	0	0	Normal	Not examined.	Vesic. emphysema.
511.	Amebic abscess of brain	July 21.	0	0	0	0	0	0	0	0	Normal	Not examined.	Bronchopneumonia.

The sign † indicates a pneumococcus sinusitis.
The sign 0 indicates a normal sinus.

* Head section not made.

The case of acute pericarditis is of interest because all the sinuses were involved, yet the meninges were normal and the lungs contained only small patches of bronchopneumonia.

The controls were all other than pneumococcus infections just as they came to autopsy; and of these, 28 per cent. had an acute inflammation of the sinuses.

I believe that the portal of entry of the pneumococcus is in most instances an accessory nasal sinus, the mucous membrane of which is probably fitted for the reception of the pneumococcus by an antecedent influenza or rhinitis, instances of infection from a carious tooth being rare.

On some of the cases a few comments will be of interest:

473.—This was a case of malarial fever, e. a., under treatment and developing lobar pneumonia during the 48 hours before death. At autopsy, from inspection and examination of smears, the stage was found to be that of red hepatization, whereas the character of the inflammation in the maxillary sinus was that of an older process.

482.—Pneumococcus endocarditis of tricuspid valve.

483.—Accessory median frontal sinus.

489.—Encephalitis following mastoiditis, in which the accessory nasal sinuses were not involved by extension.

490.—The fluid in the sinuses was hemorrhagic and fibrinous —not purulent.

493.—A tooth infection—caries of right upper bicuspids, abscess, osteitis, and purulent inflammation of right maxillary sinus, the only one involved.

506.—Accessory median frontal sinus. All of the sinuses were involved. There was no meningitis or lobar pneumonia, but an acute fibrinopurulent "primary" pericarditis.

A more detailed account of this work will be published later.

I wish to express my thanks to Col. W. C. Gorgas, U. S. A., Chief Sanitary Officer, for his kind permission to publish this communication.

AN ACCURATE AND RELIABLE THERMOREGULATOR.

A. ROBIN, M.D.

WILMINGTON, DEL.

The multiplicity of thermoregulators on the market is a sufficient proof that none of them is thoroughly satisfactory. A vexatious experience of several years with several instruments resulted in the adoption of the following device which proved entirely satisfactory:

DESCRIPTION.

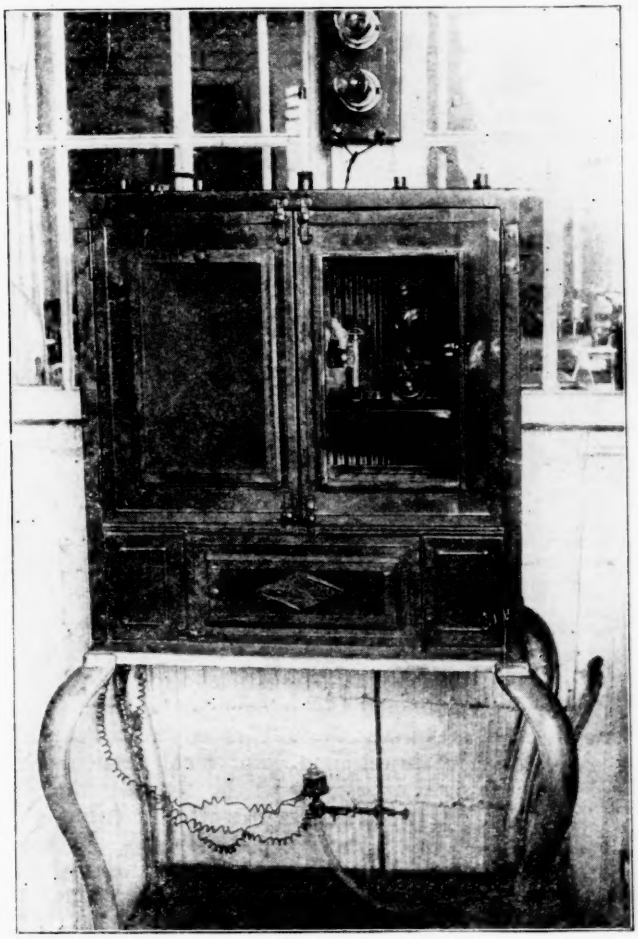
This apparatus consists of an automatic burner, the same as is used in lighting residences, and thermostat.

Automatic Burner.—This consists of two electro-magnets which control a small valve. In ordinary usage the magnet opening the valve is brought in action by a push-button which, at the same time, operates a spark coil. As the gas issues it is lighted by the spark. Another push-button operates the magnet which closes the valve and extinguishes the light. To obviate the necessity of a spark coil, I bent one of the springs which operates the valve so that when the latter is closed the gas is not shut off completely, and a small flame is left burning.

Thermostat.—For over two years I used a thermostat which consists of a metal frame carrying an expanding bar made up of a strip of hard rubber and one of brass firmly bound together. One end of the bar is pivoted while the other has attached to it a brass wire with a flattened point. The latter travels between two platinum contact points, establishing the circuit either on the dark or light side, according to whether the bar expands when the temperature passes beyond a certain point, or contracts when the temperature is lowered. This form of thermostat is furnished by Bausch and Lomb with their electric thermoregulator for oil lamps. The motive power is furnished either by batteries or, what is much more convenient, if electric light is available, is to reduce the street current by two lamps (one 16 and one 8 candle-power) and connect the thermostat to the reduced current, as shown in the illustration.

While the arrangement described worked satisfactorily in so far as the burner is concerned, the thermostat did not. Now and then it would catch and fail to make the contact; or the contact points would become encrusted and fail to establish the circuit.

Recently I obtained from the Electric Heat Regulating Co., Minneapolis, their thermostat which they use in connection with



a heat-regulating device and which consists of a round steel spring carrying a steel blade. The fore end of the latter travels between two contact points, the contact being made on the light or dark side, according to the expansion or contraction of the spring. The adjustment of this device is very satisfactory, and the working of the thermostat in connection with the burner has proved perfect. The temperature of the incubator has been maintained between 37.5 and 38 C. with a constancy which far exceeds any regulator I had before used.

I am satisfied that in the method of regulating the temperature of an incubator described above I have an arrangement which for simplicity and accuracy will find favor with laboratory workers.

Brutality for Humanitarian Purposes.—The El Paso *Times* states that the students of the medical school at Guadalajara, Mexico, have been granted permission by the city council to give four bull fights in the local arena. The proceeds are to be devoted to the purchase of some needed instruments for the city hospital and to the establishment of a medical library for the use of the students.

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON-OFFICIAL REMEDIES." THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(*Continued from page 1489.*)

NOVOCAINE.

Novocaine, $C_6H_4.NH_2(COO.C_2H_4.N(C_2H_5)_2,HCl) = C_{13}H_{21}O_2N_2Cl$, is the monhydrochloride of para-amino-benzoyldiethylaminoethanol.

Novocaine crystallizes from alcohol in fine, colorless needles, which melt at 156° C. (312.8° F.). It is soluble in an equal weight of water, but requires 30 parts of alcohol. From the aqueous solution, which is neutral, alkali hydroxides and carbonates precipitate the free base in the form of a colorless oil, which soon congeals to a crystalline mass, but solution of sodium bicarbonate is miscible with solutions of novocaine without producing either precipitation or turbidity. The free base crystallizes from diluted alcohol with 2 molecules of water, but from ether or lignoin in the form of anhydrous shining prisms, which melt at 58° to 60° C. (136.4° to 140° F.), while the hydrated base melts at 51° C. (123.8° F.).

The aqueous solution of the salt may be heated to boiling without decomposition, and remains perfectly clear when kept for days in loosely stoppered vials. It gives precipitates even in very dilute solutions with the usual alkaloidal reagents, such as postassium-mercuric iodide, picric acid, potassium iodide, etc.

It is incompatible with alkalies and their carbonates and the alkaloidal reagents.

Actions and Uses.—It is a local anesthetic similar to cocaine, but said to be far less toxic than any of the cocaine substitutes. When injected subcutaneously it is said to exert a prompt and powerful anesthetic action, but the effect is not sustained. This may be remedied by the simultaneous injection of suprarenal alkaloid. Novocaine is not irritant.

It is recommended in all cases in which cocaine is indicated.

Dosage.—For infiltration anesthesia, solutions of 0.25 Gm. (4 grains) novocaine in 100 or 50 Gm. (3.2 or 1.6 ounces) physiologic salt solution, with or without 5 or 10 drops of suprarenal alkaloid solution (1-1000); for instillations and injections, solutions of 0.1 Gm. (15.4 grains) novocaine in 10 or 5 Gm. (150 or 75 grains) salt solution, with or without 10 drops of suprarenal alkaloid solution (1:1000). In ophthalmology, 1 to 5 to 10 per cent. solution and in rhino-laryngology 5 to 20 per cent. solutions are recommended, with the addition of 6 to 8 drops of suprarenal alkaloid solution (1:1000) to each 10 Cc. (160 minims). Internally, owing to its feeble toxicity, it may be given in doses up to 0.5 Gm. (7½ grains) to adults.

Manufactured by Farbwerke vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

ORTHOFORM-NEW.

META-AMIDO-PARA-OXYBENZOATE OF METHYL.

Orthoform-new, $C_6H_3.(COO.CH_3)(NH_2)(OH)$, $1:3:4 = C_8H_9O_3N$, is the methyl ester of meta-amido-para-oxybenzoic acid.

It is prepared by the nitration of para-oxybenzoate of methyl and reduction of the nitro-product obtained.

It occurs in a fine, white, crystalline powder, neutral in reaction, and melting at 141° to 143° C. (285.8° to 289.4° F.), odorless and tasteless. It is scarcely soluble in water, but soluble in 5 or 6 parts of alcohol and in 50 parts of ether. It is decomposed by boiling with water or by warming with alkalies or their carbonates, into methyl alcohol and paroxybenzoic acid. When crystallized from chloroform it sometimes assumes the form of white crystals melting at 110° to 111° C. (230° to 231.8° F.) returning on melting to the ordinary form.

The filtrate obtained after shaking a small portion with water produces a fugitive color with ferric chloride and should not give a reaction with silver nitrate. A solution of 0.1 Gm. in 2 Cc. of water by the aid of hydrochloric acid is colored yellowish red on addition of sodium nitrite and then deposits a yellow precipitate, deepening to red on exposure to the air.

It is decomposed by heating with water; it is incompatible with alkalies and their carbonates.

Actions and Uses.—Orthoform-new is a local anesthetic, resembling cocaine in its local action, but not penetrating the tissues on account of its insolubility. It has practically no action on the unbroken skin and produces no irritation except slight corrosion about the place of application. It is somewhat antiseptic and practically non-toxic in the usual doses.

It is used internally to relieve the pain of gastric ulcer. Since it acts only on ulcerated surfaces, the relief of pain has been assumed to be evidence of the existence of an open ulcer. It has been applied locally as an analgesic to wounds of every description. It has been used in dentistry, in nasal catarrh, hay fever, etc.

Dosage.—Internally, 0.5 to 1 Gm. (8 to 15 grains) in emulsion; locally, in substance as a dusting powder or mixed with milk sugar for insufflation, dissolved in ether and mixed with oil for pencilings, or as salve with wool fat (lanolin), etc.

Manufactured by Farbwerke vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York). U. S. patents Nos. 610,348 and 625,158.

ORTHOFORM-NEW HYDROCHLORIDE.

Orthoform-new hydrochloride $C_8H_9O_3N.HCl$, is the hydrochloride of meta-amido-para-oxybenzoic methyl ester.

It is a white, crystalline powder, having an indefinite melting point and an acid reaction. It is soluble in 10 parts of water. Its reactions are the same as those of orthoform-new, except that it gives a reaction for chlorides with silver nitrate and has an acid reaction; 3.65 Gm. dissolved in 50 Cc. of alcohol require not less than 17.8 Cc. nor more than 18 Cc. of normal solution of sodium hydroxide to produce a neutral liquid.

Its incompatibilities are the same as those of orthoform-new.

Actions and Uses.—The actions, uses and dosage of this compound are similar to those of orthoform-new, which see.

Manufactured by Farbwerke vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

OVOFERRIN.

FERRI VITELLINUM SYNTHETICUM.

Ovoferrin is a solution containing 5 per cent. of an artificial proteid-product in which iron is present in the so-called "organic" or "masked" form (a form which does not give the iron-test directly). The solution also contains 10 per cent. of alcohol and some aromatics.

Ovoferrin is prepared by modifying serum-albumin by electrolysis, producing a proteid which is classed by the manufacturers as a vitellin, and introducing ferric hydrate into this proteid by heating under pressure. The "vitellin" constituent of this preparation should not be confounded with the well-known vitellin of the yolk of eggs.

The solution has a reddish-brown color, little odor, and a flat, slightly aromatic and alcoholic taste.

The solution does not give a blue color on the addition of potassium ferrocyanide solution; a blue tint develops slowly if an equal volume of 5 per cent. hydrochloric acid is added to the mixture; a deep blue color develops at once if this mixture is boiled (difference from egg yolk).

The solution is not precipitated by boiling, but gives precipitates with the alkalies, with which it is incompatible. It is also precipitated on half saturation with ammonium sulphate. It is not precipitated by acids.

Actions and Uses.—Ovoferrin is not appreciably affected by the gastric juice, a 0.5 per cent. solution of hydrochloric acid liberating its iron very slowly and in-

completely. The product ranks with the other forms of artificially masked iron, which are devoid of the local action of the soluble inorganic iron salts, and, according to some authorities, are more readily absorbed and utilized.

Dosage.—8 to 16 Cc. (2 to 4 fluidrams) corresponding to from 0.03 to 0.06 Gm. (½ to 1 grain) three times a day.

Manufactured by Barnes & Hille, Philadelphia. U. S. trademark.

OXAPHOR.

Oxaphor is a 50 per cent. solution of oxycamphor, $C_8H_{14}{<}^{CHOH}_{CO}$ = $C_{10}H_{16}O_2$, a derivative of camphor in which a hydrogen atom has been replaced by a hydroxyl group.

Oxycamphor is prepared by reducing camphor quinone, $C_8H_{14}(CO)_2$ by means of zinc dust and acids, extracting the oxycamphor from the liquid product of the reaction with an immiscible solvent and purifying it by distillation with steam.

Oxycamphor is a white crystalline powder, neutral in reaction, melting at 203° to 205° C. (397.4° to 401° F.). It is soluble in about 50 parts of cold water, more soluble in warm water, and readily soluble in all organic solvents except petroleum benzin, in which it is less soluble, but from which it crystallizes in feathery aggregations. On prolonged keeping it is prone to undergo decomposition, but it keeps permanently in alcoholic solution. It volatilizes gradually at ordinary temperature and readily with steam.

Oxycamphor, being decomposed on prolonged exposure to the air, is marketed only in the form of the 50 per cent. alcoholic solution under the name of "oxaphor."

Oxaphor should be completely soluble in alcohol and in benzene, forming clear solutions. Its filtered aqueous solution after acidulation with nitric acid should not afford a precipitate with silver nitrate or barium chloride. When incinerated it should yield no weighable residue.

Actions and Uses.—Oxaphor is a depressant to the respiratory center, but is said to have no effect on circulation and secretion.

It is recommended as a substitute for morphine in respiratory disorders, chiefly in cardiac dyspnea and asthma. It is said to have been used with advantage in renal affections, in emphysema, bronchitis, etc. Freedom from undesirable side-effects is claimed as an advantage over morphine.

Dosage.—2 to 3 Gm. (30 to 45 grains) of oxaphor in a little water, wine, syrup or other desirable adjuvant.

Manufactured by Farbwerke, vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York). U. S. patent No. 670,361.

PHENACETIN.

A name applied to Acetphenetidinum, U. S. P.

Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York). U. S. patent No. 400,086 (expired); U. S. trademark Nos. 16,392 and 18,637.

PHENOCOLL HYDROCHLORIDE.

AMIDOACETPHENETIDIN HYDROCHLORIDE. GLYCOCOLL-PARAPHENETIDIN HYDROCHLORIDE. PHENAMINE.

Phenocoll hydrochloride, $C_6H_4.OC_2H_5NH(CH_2NH_2.CO)HCl = C_{10}H_{14}O_2N_2.HCl$, is the hydrochloride of a synthetic base produced by the combination of phenetidin (paraamidophenetol) and glycocoll (amidoacetic acid). Phenocoll, $C_6H_4.OC_2H_5.NH(CH_2CH_2.CO)$, differs from acetphenitidin (phenacetin), $C_6H_4.OC_2H_5.NH(CH_3.CO)$, only in that one hydrogen atom in the acetyl group has been replaced by the NH_2 group.

It is prepared by the action of chloracetylchloride on phenetidin, treating the product of the reaction with ammonia, neutralizing the amidoacetphenetidin (phenocoll) so produced with hydrochloric acid, and crystallization.

It is a white, microcrystalline powder, soluble in 16 parts of water at the ordinary temperature, more soluble in hot water, from which it crystallizes in cubes, while from hot alcoholic solution it crystallizes in needles. It is barely soluble in chloroform, ether or benzene (benzol). The free base (phenocoll) obtained by precipitating the aqueous solution with fixed alkalies or their carbonates forms white, matted needles, containing one molecule of water. In its hydrated condition it melts at 95° C. (203° F.), while the anhydrous base melts at 100.5° C. (212.9° F.). It is stable and not chemically affected by acids or alkalies unless subjected to prolonged boiling with these reagents, by which phenocoll is split into phenetidin and glycocoll.

It should produce a clear solution with 30 parts of water, a turbidity indicating the presence of di- or tri-phenocoll, and the solution should not produce a red color with ferric chloride, showing absence of free phenetidin. No ammonia should be evolved on the addition of sodium hydroxide to the warm solution, and the precipitated base should be of a pure white color.

Phenocoll hydrochloride is incompatible with soluble hydroxides or carbonates.

Actions and Uses.—Phenocoll hydrochloride is similar to acetphenetidin (phenacetin) in its effects and acts as an antineuralgic and antipyretic. It is claimed by some observers to be less depressing than other coal tar antipyretics and is said to be prompt in its antipyretic action. It has been asserted to have an antiperiodic action and to be efficient as a substitute for quinine in malaria and free from unpleasant by-effects. In somewhat larger doses than are usually employed it is said to have a beneficial action in rheumatic fever.

Dosage.—0.3 to 1.3 Gm. (5 to 20 grains) in powder, dissolved in water before taking; hypodermically, in 0.25 to 0.5 Gm. (4 to 8 grains) doses.

Manufactured by Chemische Fabrik auf Actien, vorm. E. Schering, Berlin (Schering & Glatz, New York). U. S. patent No. 543,214.

PHENOCOLL SALICYLATE.

Phenocoll salicylate, $C_6H_4.OC_2H_5.NH(CH_2NH_2.CO).C_6H_4.OH.COOH = C_{17}H_{20}O_5N_2$, is the salicylate of the synthetic base phenocoll (see phenocoll hydrochloride).

It is prepared by neutralizing a hot aqueous solution of salicylic acid with phenocoll (obtained as described under phenocoll hydrochloride) and cooling the solution.

It forms fine, white, crystalline needles, having a sweetish taste, sparingly soluble in cold water (1:200), readily soluble in hot water. It gives a violet reaction with ferric chloride.

It is incompatible with soluble hydroxides and carbonates and with bodies which are incompatible with the salicylates in general.

Actions and Uses.—It combines the therapeutic action of phenocoll (antipyretic, analgesic, see phenocoll hydrochloride) with those of salicylic acid (antiseptic, antirheumatic).

It is recommended in rheumatism, gout, chorea, pleuritis and fevers, especially in influenza.

Dosage.—1 to 2 Gm. (15 to 30 grains).

ICHTHALBIN.

A Correction.—In THE JOURNAL, Oct. 27, 1906, page 1378, under Ichthalbin, the paragraph on "actions and uses" belongs to Ichthoform. The paragraph should read: Its actions and uses are the same as those of ichthyol, with the asserted advantage of freedom from such side effects as nausea, eructations, etc. It is recommended for the same purposes as ichthyol.

(To be continued.)

Use of Saponin in Mineral Water.—The toxic character of saponin added to mineral water to increase the froth was the subject of debate at the recent meeting of the Association of German Mineral Water Manufacturers (*Pharmazeutische Zeitung*, Sept. 22, 1906). While this substance has been used for twenty-five years without objection from a sanitary standpoint, last year the police chemists suddenly announced that it is injurious to health and must no longer be added to drinks. Later animal experiments indicated that its use is not injurious. The association appropriated about $240 for an investigation to determine the question.

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SATURDAY, NOVEMBER 10, 1906.

THE EXPERIMENTAL PRODUCTION OF ATYPICAL EPITHELIAL PROLIFERATION IN RELATION TO CARCINOMA.

In view of the rather meager results so far obtained by the efforts to produce epithelial proliferation through external irritation, Bernhard Fischer[1] hit on the idea of trying to induce by experiment chronic inflammatory changes in the cutis without injury of a direct nature to the overlying epidermis. Perchance changes so induced in the cutis might lead in some way to epithelial proliferation, an idea that clearly is the outgrowth of the view held by Ribbert, in whose institute Fischer's work was done, of the great importance of the inflammatory infiltration about carcinomas in their genesis.

Accordingly, various substances were injected very carefully into the tissues of a rabbit's ear, but without any especially noteworthy results until olive oil mixed with the fat-staining dye called "Scharlach R" was used. As the oil fills the interstices of the tissue the epithelium of the ear is lifted away from the cartilage; in a few days mitoses appear and the epithelial layers increase in thickness, processes extend downward, epithelial pearls are formed, and eventually a picture is produced that morphologically recalls the structure of flat-celled carcinoma of the skin. Epithelial down growths may perforate the cartilage, and in one instance growth was noted in a large lymph vessel.

Inasmuch as these striking changes were produced only by olive oil with "Scharlach R" ("scarlet oil") it follows that the inflammatory changes caused by its injection in themselves can not be regarded as the cause of the epithelial proliferation. On the contrary, the proliferation must be traced to the special effect of the "scarlet oil" on the epithelial cells, and many details in the anatomic picture favor this view, and especially the fact that the direction and the extent of the epithelial growth follow very closely the distribution of the oil. Of course, other substances may have the same effect also. The important fact brought to light in these experiments is that "scarlet oil" appears to exercise a specific attraction or chemotaxis on cutaneous epithelial cells in the rabbit. Whether the same effect obtains generally in mammals, including man, remains to be seen.

1. Münch. med. Wochenschr., 1906, vol. liii, p. 2042.

While in no case did these experiments give rise to an actual carcinoma, the demonstration that substances which by special action cause epithelial proliferation are available for experimentation must prove of great value in the study of cancer, and it does not seem to be saying too much to predict that Fischer's work will have a decided and stimulating influence on the investigation of malignant tumors.

Fischer employs his results in constructing an ingenious hypothesis of the origin of malignant tumors. Starting with the existence of a "tumor matrix," be it of embryonal or postembryonal origin, composed of cells that naturally would differ somewhat from the other cells of the organ in their chemical activities, he assumes that unrestrained proliferation may be set in motion on the advent of some specific substance or *attraxin* which acts on the cells of the matrix only and not necessarily on other cells of the affected organ or body. The obvious necessity to assume a large number of specific chemotactic substances need not appear insurmountable in view of the great multiplicity of specific substances known already to exist in the serum, thanks to the investigations of immunologists during recent years. He points out that it is also conceivable that groups of cells which have been placed under unusual or abnormal conditions for some time may so change their chemical peculiarities that substances normally present in the body might exert special attraction on them. In this case one would expect the resulting tumors to be transplantable to other animals of the same species. In this case Fischer's theoretical consideration appears to coincide in a general way with Ehrlich's conclusions from his study of transplantable tumors in mice, viz., that the tumor cells acquire a special and increasing avidity for certain substances circulating in the blood. We hope that the ideas here briefly indicated may prove fruitful working hypotheses and that the experimental production of atypical epithelial hyperplasia actually opens a new route for attack on the problem of the cause of cancer.

THE NEW YORK WATER SUPPLY: AN OBJECT LESSON TO SANITARIANS.

The need for expert supervision and control over municipal water supplies has perhaps never been more forcibly illustrated than in the series of documents published by the Merchants' Association of New York City. It has long been a source of wonder to European visitors that a matter so important to the public health, and so momentous to the welfare of a community as the public water supply, should be left to any degree in the hands of greedy contractors or irresponsible and perhaps treacherous public officials. The plight in which the city of New York finds itself furnishes a strong argument to those who are urging a larger measure of foresight and expert control in municipal affairs. It has been pointed out in the last few years by engineers

of eminent authority that New York is in almost constant danger of a water famine. In one of the recent reports of the Merchants' Association it is stated that "the existing storage is insufficient to carry the city over a protracted dry season unless the present rate of consumption be materially reduced. In 1899 and 1900 the city was dependent for 255 days on its stored water. At the present rate of consumption in case of continued drought the stored supply would be exhausted in 245 days. Before a new supply is available it is estimated that the draft on the storage during the dry season will have so increased as to exhaust it in 175 days."

At present the city of New York has eighty-two distinct sources of water supply, but this is quite insufficient. The work of procuring an additional quantity of water has already been entered on, but has met many grievous and unnecessary delays. . . . "by trifling with the work at Jerome Park reservoir, we have been tempting Providence for several years. The city under a special act of the legislature agreed to pay the contractor $500,000 more than the contract price on the basis of an eight-hour day to finish the work by Sept. 1, 1904 (full performance of which was due under the original contract on Nov. 1, 1902), but the work is not yet done—in fact, only the westerly of the two reservoirs is completed, and that but recently." When completed, it is stated that the city's water system will have cost more than $280,000,000. As a whole, the finished New York system will be one of the largest public works ever undertaken by any community in ancient or modern times.

There is one point brought out in the recent discussion of the New York situation to which attention should be directed. It is shown that the imminent danger of water shortage is due in large part to a waste of water through thievery, defective plumbing and carelessness, which is clearly preventable. The average daily consumption of water in New York, as in nearly all other large American cities, is at least three or four times as great as in European cities of the same class which are as cleanly kept and in which manufacturing industries dependent on abundant water supply are as numerous as in the American municipalities referred to. When an engineering authority computes the needless waste in New York City at from 50 to 75 gallons a day for each inhabitant, an amount greater than the whole per capita consumption in most German cities, it is plain that the situation is serious. This extravagant waste of water has a direct sanitary, as well as economic importance.

The necessity for some sanitary supervision over a great public supply is too obvious to require argument. The pollution of water on the various watersheds must be prevented, industrial nuisances abated, local systems of sewerage maintained, local filter plants established, and a rigorous sanitary patrol of the watersheds kept up unceasingly. The larger the amount of water to be provided, the more extended must be the area to be supervised and the more imperious the necessity for constant vigilance. In other words, a needless increase in the quantity of water to be supplied to a given community throws a heavy burden on those responsible for the sanitary quality of the supply and increases enormously the danger of a breakdown in sanitary efficiency. Any measure, then, that tends to diminish that large fraction of the per capita water consumption in American cities which is pure waste deserves to receive the hearty support of all interested in municipal sanitation. The sanitary quality of a large water supply can undoubtedly be improved by reducing the amount of waste, and the efforts of the Merchants' Association of New York in this direction are worthy of general imitation.

THE ETIOLOGY OF CHOREA.

Chorea, as one of the most frequent nervous diseases of childhood, must always command interest, and this is increased by the mystery regarding its relation to rheumatism and its rather obscure pathology. While it is true that from time to time distinct brain lesions have been described, and while it is also true that certain writers have even regarded it as rheumatism of the brain, no such direct evidence as that of Poynton and Holmes[1] has hitherto been adduced. It will be remembered that Poynton has been working on the bacteriology of rheumatic fever for some years, and may justly be regarded as an authority on this subject. The view which he and his collaborator take of chorea is that it is in most cases rheumatic, and that it is directly due to an infection of the brain and meninges with the *Diplococcus rheumaticus*.

The evidence on which this hypothesis is based (Poynton frankly states that it is a hypothesis) is, we think, rather striking. It consists in the demonstration of the *Diplococcus rheumaticus* in the cerebral tissues of three cases of chorea, two of them ordinary rheumatic cases, the third a case of chorea gravidarum. In the latter case there was no rheumatism, but there was an associated acute endocarditis from which the same organism was obtained. In association with the micro-organisms were definite cerebral lesions, partly vascular, in the form of infiltration of the perivascular lymph spaces, thrombosis of vessels and areas of necrosis, and partly cellular, in the form of chromatolytic changes in the brain cells.

The authors regard chorea, then, as due to the toxins of the diplococcus acting on the nerve cells, an action which they compare to that produced by strychnin or tetanus toxin. The fact that in chorea the symptoms are mainly motor, while the degenerations are not confined to the motor areas, they regard as, so to speak, accidental. As they point out, symptoms other than motor ones may be observed, particularly the mental peculiarities of the disease, which, as is well known, may amount to

1. Lancet, Oct. 13, 1906, p. 982; abstracted in THE JOURNAL, Nov. 10, 1906, p. 1599.

actual insanity. They think that the toxin is of a rheumatic nature not only on account of the bacterial findings, but also on account of the frequent association of the two diseases and the resemblances in their natural history such as their tendency to relapse, their mode of onset, and their association with secondary lesions common to both. They are not as yet prepared to say that all cases of chorea are rheumatic. The chorea of pregnancy is also generally rheumatic, statistics showing that in a large proportion of cases the patients give a history of previous attacks of articular rheumatism.

While these researches are in many ways convincing, they do not prove the rheumatic origin of chorea. If it were admitted on all sides that rheumatism is due to the *Diplococcus rheumaticus* they might be considered to do so. But this is far from being the case. The results of cultures in acute articular rheumatism have been far from concordant. In many cases cultures have been sterile. These researches do seem to show that chorea is definitely associated with the presence of micro-organisms in the brain and meninges, and with definite anatomic lesions which are probably due to them, and this in itself is of great interest. Before it is definitely decided that these organisms are the true causal agent, the etiology of rheumatism must be cleared up, and so far this has not been done to the satisfaction of even the majority of those who are competent to judge.

A DANGER IN ORGANOTHERAPY.

A very interesting development of our knowledge of the effect of the various preparations of the suprarenal gland has been the confirmation from a number of observers in different countries of the fact that the use of considerable quantities, in animals at least, produces arterial degeneration. It is pointed out as a triumph of experimental pathology that at last we are in the position to be able to produce degeneration of arteries at will for purposes of study. It is rather disquieting news, however, for those who have been prescribing the remedy in considerable doses for some time and still more for those who have advised its employment over prolonged periods for the treatment of nasal conditions. The use of various preparations of the suprarenal gland in powder form for local applications in the nose has not been confined to physicians' hands; patients have been given powder blowers and have been counseled to use the substance rather freely at intervals of a few hours in order to have that freedom of nasal respiration, the absence of which in enlargement of the turbinates and in various conditions of hyperemia of the nasal mucous membrane is a source of so much discomfort.

We are not sure how much of the powder or of certain extractives may be absorbed into the system as the result of this application. Observation has shown, however, that there is a certain increase of blood pressure from fifteen minutes to a half hour after the application and that occasionally also there is some increase in the rapidity of the heart action. The latter effect is probably only secondary to the increase of blood pressure. It is easy to understand that such effects if frequently repeated over prolonged periods would almost surely lead to the development of precocious changes in the arteries if not in the heart. Repeated doses would not produce the acute degenerations that are seen in animals from massive doses, but such use of the substance can scarcely be expected entirely to preclude the danger of gradually progressive changes in the direction of pathologic conditions. In a word, not enough is yet known with regard to the physiologic action of suprarenal substance or its extracts to justify us in advising its employment as a routine remedy for any length of time.

This is a typical example of the dangers that are involved in the application of the very limited knowledge we possess at the present time as to the ultimate action of most of the organo-therapeutic remedies. We know that they are often extremely active substances, sometimes very helpful in their immediate effects. Beyond this, however, our knowledge does not go. It could easily happen that pathologic processes—the real source of which would remain latent until the coincidence of a number of cases occurring under similar conditions would arouse suspicion—might unwittingly be initiated by their use. It would be sad, indeed, if our modern scientific medicine should have any such rude awakening from its dream of therapeutic progress as this would occasion. It at least behooves us to be reasonably careful in the application of such remedies and especially not to hand over the employment of them too freely to the public under such circumstances that they will be used over prolonged periods without proper safeguards and the careful observation of a trained medical mind.

NEWSPAPERS AND QUACKS.

Condemnation of the charlatan by medical men is often viewed with suspicion by the layman and subjects the physician to the unjust charge of jealousy and self-seeking. No such suspicion, however, can rest on the layman who shows up these fraudulent practitioners. Copies of the *Cleveland News* come to our desk, telling of a very interesting investigation made by a reporter for the paper, Charles F. Stuart, among "eminent specialists" of that city. He declares: "I have known some murderers, a few burglars, some pickpockets and a scattering assortment of other criminals, and until recently I held that the thief who robs the children's fresh-air-fund contribution box holds the record for combined cowardice and meanness in the art of theft. Since then, however, I have visited that colony of graft called 'quackdom.' Now I feel like taking off my hat to the fresh air fund sneak and telling him that he has not only an equal, but a superior." Being in perfect physical condition, Mr. Stuart first secured a thorough

examination by reputable physicians and obtained from them certificates that he was in a normal condition and in excellent health. He then went to some of the quacks of Cleveland, who found him afflicted with heart trouble, nervous prostration, kidney disease, bladder trouble, liver complaint, stomach trouble, etc. The reporter, writing in a lay publication, has to veil what he means by "etc." Almost every quack assured him that he was the victim of certain unmentionable diseases, evidently, he suggests, to secure a hold on him and to induce secrecy and thus to prevent exposure of their lies. He secured medicines from many of these quacks and publishes their pictures and tells what they claim they could do for him, thus making a showing that certainly ought to be of inestimable value to the people of Cleveland, afflicted as that city is with these parasites. In our miscellany department this week we quote further from these articles. The *News* certainly is doing good work and its example might well be followed elsewhere.

PHYSICIANS AND POPULARITY IN GERMANY.

Some time ago when the niches in the Hall of Fame were to be filled, there was a certain amount of surprise, among the medical profession at least, that no physicians were included in the list of the chosen. Many of us thought that Benjamin Rush, at least, ought to have had his niche. In contrast to this, notice the result of the recent popular vote in Germany as to the twelve greatest men in the fatherland. Third in the list stood the name of Robert Koch, and eleventh that of Ernst von Behring. This does not indicate that American physicians have never accomplished anything, but, rather that the American people, taking them on an average, do not have the same knowledge of the general affairs of the world as the German. This statement will perhaps bear modifying, for the Americans are great newspaper readers. The fault probably lies with the newspaper editors, so many of whom are unable to distinguish real medical progress and achievement from the self-advertising announcements by quackish members of the regular profession, or even from the "remarkable discoveries" heralded in the advertising columns. When we consider that the South, which benefited immeasurably by his discovery, only contributed a few hundred dollars toward the fund to perpetuate the name of Walter Reed, and that this was mostly contributed by physicians, we get some idea of popular knowledge of medical discoveries in this country. Let us hope that this condition will not always continue.

THE BLOOD CHANGES IN MUMPS.

There are few affections with which mumps is likely to be confounded, but at times, especially at an early stage of the disease, and when a definite diagnosis is at once required, a ready means of recognition is much to be desired. It has been shown that characteristic changes in the blood take place even during the first days of an attack of mumps, and this fact may be utilized practically as a means of diagnosis. The number of leucocytes is, as a rule, increased, although the leucocytosis may not be marked. There is a noteworthy increase in the number of lymphocytes and a somewhat proportionate diminution in the number of polymorphonuclear neutrophiles. Observations yielding parallel results have been made by Dr. Ira S. Wile,[1] who has found the lymphocytosis, both relative and absolute, constant, appearing on the first day of the disease and persisting until the glandular swelling has subsided. The degree of lymphocytosis appears to bear some relation to the severity of the attack, for it is more marked when the affection is bilateral than when only one side is involved. The phenomenon is most marked at puberty, and it becomes progressively less pronounced with advancing years. In this connection it should be borne in mind that the number of lymphocytes is normally high in early life, but after the age of one year it does not attain the figures observed in the presence of mumps. In the same degree as the number of lymphocytes is increased in the course of this disease the number of polymorphonuclear neutrophiles is diminished. In the presence of complications, however, such as orchitis, the number of polymorphonuclear neutrophiles undergoes an increase, although there may be no absolute leucocytosis. The eosinophiles are slightly diminished at the beginning, but their number becomes normal or increased during convalescence. The basophiles remain unchanged. There is no secondary anemia. Examination of the blood is especially valuable in the diagnosis of mumps from the condition with which it is most likely to be confounded, namely, cervical adenitis. In the latter, however, the leucocytosis is generally quite marked, and the polymorphonuclear neutrophiles, and not the lymphocytes, are increased.

A GOOD LEGISLATIVE RECORD IN MASSACHUSETTS.

Regardless of party affiliation, the physicians of Massachusetts seem to be well pleased with the record of the recent state administration. A committee of physicians prepared a circular of commendation and it has received the endorsement of hundreds of physicians from all over the state. In it, attention is called to the achievements of the state administration in increasing and strengthening the statutory safeguards erected for the protection of health and physical well-being of the citizens of Massachusetts. In our news department this week we quote from this circular the portion which itemizes the enactments referred to. The circular particularly praises Governor Guild, who has just been re-elected to another term, for the "enlightened and active interest" which he has exerted in the unusual number of important measures that have been placed on the statute books of Massachusetts this year and for his "breadth of knowledge and keenness of interest" in the preservation of the public health in general and of the personal welfare of every citizen. We congratulate Massachusetts on this excellent record in public health affairs and we are glad the profession has not been slow to express itself.

1. Centrbl. f. Bakt., 1906, vol. xxxi, p. 669.

Medical News

ARKANSAS.

Personal.—Dr. Anderson Watkins, city physician and superintendent of the city hospital of Little Rock, will, it is reported, retire at the end of his present term and resume private practice.——Dr. Ollie Oberholtzer, Little Rock, has decided to become a medical missionary and will sail for India about the first of December.

Crusade Against Tuberculosis.—The Fort Smith Board of Health has inaugurated a crusade against the spread of consumption and has issued a circular to physicians, professional nurses, clergymen, teachers, the daily press and employers of men, detailing briefly the facts regarding tuberculosis and the best methods of its prevention.

Hospital Notes.—The judge of Sebastian County has authorized the purchase of 25 acres in the eastern portion of Fort Smith for a poor farm, on which a detention hospital will be erected.——The site for the Kansas City Southern Railway Hospital, Mena, has been selected and work will be commenced at an early date.——The contract has been let for building the hospital at Pine Bluff, to be conducted by the Ladies' Hospital Association. The building will cost about $10,000, and its erection has been made possible by a bequest of the late Major W. H. Davis, Althetmer, who donated the site and a considerable amount of the money required.

CALIFORNIA.

Hospital News.—The board of public works has notified the Los Angeles board of health that the new isolation hospital, erected at a cost of $56,000, is completed and ready for use. ——A hospital is about to be erected for the Mammoth Company at Kennet.——Plans for a hospital for Santa Clara County, to cost $50,000, were adopted by the board of supervisors, October 2.

Health Association Meeting.—The California Public Health Association held its fall meeting at Alum Rock Springs, San José, October 12. The chief topic of discussion at the meeting was the mineral springs of California. Dr. Robert Crees, Paso Robles, read a paper on "The Use and Abuse of Mineral Springs," and Dr. Philip Mills Jones, San Francisco, editor of the *California State Journal of Medicine*, described the different kinds of springs and their qualities. In the general discussion which followed it was suggested that the city of San José place placards at each of the 18 different springs in Alum Rock Park, telling of its individual qualities and how the waters would best be used.

CONNECTICUT.

Hospital Note.—The funds for the erection of a new Catholic Hospital, Waterbury, now amount to $33,000. The site has been purchased, plans are practically completed, and the construction of the building will soon commence.

War Against Diphtheria.—Dr. Jos. H. Townsend, New Haven, secretary of the State Board of Health, in his monthly report for September, urges the adoption of energetic means of stamping out the spread of diphtheria, which he believes will be epidemic this winter.

September Deaths.—The State Board of Health reports that during September 1,344 deaths occurred, 312 less than in August and 144 more than in September, 1905, and 155 more than the average number of deaths for the month during the five years preceding. The death rate was equivalent to an annual rate of 16.0 per 1,000, and the deaths from infectious diseases were 205, or 15 per cent. of the total mortality. The chief death causes were: Diarrheal diseases, 183; diseases of the nervous system, 133; heart diseases, 105; consumption, 89; accidents and violence, 76; pneumonia, 46; typhoid fever, 40; diphtheria, 31, and whooping cough, 24.

DISTRICT OF COLUMBIA.

New Army Hospital.—The bids for the construction of the Walter Reed Army General Hospital varied from $195,025 to $232,715.

Typhoid Fever.—During the week ended October 27 there were 50 cases of typhoid fever reported to the health office and on that day there were 267 patients under treatment.

Cocain Peddlers.—The health department and police of Washington are trying to break up the practice of selling cocain in that city. Recently two cocain venders were arrested and convicted, the second one being fined $200 and sentenced to six months' imprisonment.

Tuberculosis Hospital.—Congress has made an appropriation of $100,000 for a hospital for tuberculous patients. A bill is now pending requiring the placarding of houses in which tuberculosis exists and requiring also that patients be taken to the tuberculosis hospital, and that houses in which tuberculous patients have resided be fumigated under the supervision of the health authorities.

Death and Disease.—The District health department reports 114 deaths during the week ended October 13, an increase of 17 over the preceding week and of 19 as compared with the corresponding week of 1905. Of the deaths, 7 were infants under one year of age. The chief death causes were: Consumption, 20; pneumonia, 9; cerebral hemorrhage, diarrhea, heart disease and kidney disease, each 8; typhoid fever, 7, and meningitis and brain disease, each 3. Diphtheria shows an increase and typhoid fever a decrease as compared with the preceding week.

GEORGIA.

Donation to College.—Andrew Carnegie has given an additional $15,000 to the Atlanta College of Physicians and Surgeons to complete the building fund.

Hospital Notes.—The new Griffin Hospital is now open for reception of patients.——The need of a hospital at Fitzgerald has caused Dr. Dudley B. Ware and other citizens to subscribe stock to buy land and equip a hospital building to contain 20 rooms.

IDAHO.

Typhoid.—Typhoid is reported to be epidemic in Valley. Twelve cases have developed and eight of the patients have been sent to the Laclede Hospital.

Personal.—Dr. John Boeck, Boise, was thrown from his carriage in a collision recently and fractured his right clavicle. ——Dr. Charles E. Sears, Wallace, who was operated on October 17 for appendicitis, is reported to be improving.

Hospital News.—The Coeur d'Alène Hospital Company has found it necessary to enlarge the accommodations of the institution and has commenced an addition to cost about $2,500 which will double its present capacity.——Plans have been completed for a hospital to be erected in Wallace, by Drs. Mowerey and J. E. St. Jaen, to cost about $7,000.

Northern Idaho District Society.—At the meeting of the Northern Idaho District Medical Society, October 4, held in Lewiston, a motion prevailed allowing the withdrawal of Kootenai and Shoshone counties, which are to be organized into a separate district. New by-laws in harmony with those of the state society were read, and the following officers were elected: President, Dr. Charles W. Shaff; vice-president, Dr. John F. Hurlbut, and secretary-treasurer, Dr. Frank L. Hinkley, all of Lewiston.

ILLINOIS.

Epidemics.—Smallpox is reported to be prevalent at Wyoming, and at Walnut, Bureau County; typhoid fever at Morris and diphtheria near Onarga, at Olney, Batestown, Hillery, and at Oakland. At the latter place the public schools have been closed.

Hydropathic Hospital.—The superintendent of the Illinois Northern Hospital for the Insane, Elgin, has outlined plans for a hydropathic hospital in connection with that institution, which have received the approval of the governor. The building is to have a capacity for about 20 patients.

Conference of Charities Election.—At the recent meeting of the Illinois State Conference of Charities, Dr. Frank P. Norbury, Jacksonville, was elected president; Dr. William H. C. Smith, Godfrey, a member of the committee on children; Dr. Vaclav A. Podstata, Elgin, chairman, and Drs. Henry B. Carriel and Josephine Milligan, Jacksonville, and Hugh T. Patrick, Chicago, members of the committee on etiology of dependents, and Dr. William A. Nason, Algonquin, member of the committee on public care of poor.

District Society Election.—At the annual meeting of the Sixth (Western) District Medical Society, held at Jacksonville, October 26, the following officers were elected: Dr. Thomas J. Pitner, Jacksonville, president; Drs. Robert J. Christy, Quincy, and Harry R. Lemen, Alton, vice-presidents; Dr. William P. Duncan, Jacksonville, secretary-treasurer, and Drs. John W. Hairgrove, Jacksonville; Henry W. Hand, Whitehall, and Waldo Fisher, Alton, directors. It was decided to hold the 1907 meeting in Quincy.

Chicago.

New Hospital Home.—The People's Hospital is about to move into its new home at Twenty-third Street and Archer Avenue, erected at a cost of $40,000. The hospital will continue to be under the charge of Dr. J. I. Gary.

Summer Hospital Closes.—The Chicago *Tribune* Summer Hospital closed its second season October 15, after a service of 16 weeks to the convalescent poor of the city. During this time the hospital cared for 372 patients, most of whom were children.

Urologists Elect.—At the annual meeting of the Chicago Urological Association Dr. Louis E. Schmidt was elected president; Dr. J. Allen Paton, vice-president; Dr. Budd C. Corbus, secretary; Dr. William T. Belfield, councilor, and Dr. Henry G. Anthony, alternate.

IOWA.

Sues Medical Society.—Alleging that the State Board of Medical Examiners has deprived him of his certificate to practice without giving him an opportunity to appear in his own defense, Anthony White, Taylor County, has instituted an action against the board in the district court. The certificate is claimed to have been revoked without a hearing.

Diphtheria.—On account of the prevalence of diphtheria in Pleasant Valley the public schools have been closed.——On account of the possibility of an outbreak in the schools of Des Moines, the public health authorities have caused several of the school buildings to be fumigated. More than 20 cases are reported and every precaution is being taken to prevent its spread.

KANSAS.

Diphtheria Closes Schools.—Owing to the prevalence of diphtheria in Kingman, the city schools were closed October 18 for one week and church services, Sunday schools and entertainments mere interdicted.

Hospital News.—The Sisters of Charity have secured a site on South Broadway, Leavenworth, for their new hospital.——The Arkansas City Lodge of Elks has voted to furnish a room in the new Arkansas City Hospital and one in the South End Arkansas City Hospital.

Personal.—Dr. Elwood Armstrong, Greenleaf, has been confined to his house for three weeks with severe phlegmon of the hand, but is now improving.——Dr. Archibald McDonald, Fort Scott, is reported to be in a critical condition.——Dr. Peter Dockler, Onaga, celebrated his one hundred and first birthday, October 5.

Communicable Diseases.—Tuberculosis, typhoid fever and diphtheria are on the increase in the state, according to the report of the board of health for September, as compared with the same month of 1905. The increases are respectively: 12 cases of consumption and 3 deaths; 24 cases of typhoid fever and 3 deaths, and 35 cases of diphtheria and 11 deaths. Diphtheria was noted in 32 counties. In Emporia 20 cases of diphtheria have been quarantined to date and two of the public schools have been closed. In Lawrence the diphtheria situation is improving. The high school and the seventh and eighth grades of the public schools have been reopened but the lower grades will remain closed for the time being. The public schools of Kingman were opened October 25 after having been closed a week on account of diphtheria.

KENTUCKY.

Physicians' Buttons.—The physicians in Louisville have been supplied with buttons, the wearing of which admits the bearer within the fire lines.

Epidemic Diseases.—Scarlet fever and diphtheria are reported to be epidemic in Elizabethtown. Several deaths are said to have occurred and all the schools have been closed.

New Dispensary.—The Kentucky Anti-Tuberculosis Association, at its meeting in Louisvile, October 26, arranged to establish a dispensary equipped with a visiting nurse, under the supervision of the committee.

Impersonated Physician.—A barber of Louisville was recently fined $19 and placed under bond of $300 for 90 days, on account of having impersonated a physician, made a physical examination of a patient and given a prescription.

Personal.—Dr. Henry A. Shelby, Mayfield, has been appointed physician of Graves County.——Dr. John D. Carpenter has been appointed assistant to the chair of clinical medicine, diseases of the chest, and medical chemistry in the University of Louisvile, Medical Department.

Ouchterlony's Will.—In the settlement of the estate of the late Dr. John A. Ouchterlony, provision was made, as has already been stated in THE JOURNAL, for a tuberculosis hospital, which will probably be attached to St. Elizabeth's Hospital, and will be under the management of the Sisters of Charity of Nazareth. The testator also bequeathed $1,000 to Dr. Charles G. Lucas and $1,000 to Dr. Oscar W. Doyle, both of Louisville.

Fight for Pure Milk.—The health officer of Louisville, Dr. Maverell K. Allen, is enlisting the aid of commercial organizations in the fight which his department is making for the passage of the pure milk ordinance, which will prohibit feeding swill to cows, and will assist in giving Louisville a clean and healthful milk supply.

Kentucky Valley Physicians Meet.—The annual meeting of the Kentucky Valley Medical Association was held at Campton, October 26. The following officers were elected: Dr. James H. Stamper, Campton, president; Dr. Cornelius Marcum, Miller's Creek, Estill County, vice-president, and Dr. Littlepage, Beattyville, secretary-treasurer. The next meeting of the association will be held in Torrent, in June, 1907.

LOUISIANA.

Campaign Against Impure Milk.—In face of threats and lawsuit, the city health officer, Dr. William P. O'Reilly, is persisting in his campaign for pure food, with special reference to the milk supply of New Orleans, a great deal of which is said still to be under standard.

Medical College Opens.—The Tulane University of Louisiana, Medical Department, New Orleans, opened for its annual session, October 22. The only change in the medical faculty was the resignation of Dr. Allan C. Eustis, instructor in physics and assistant demonstrator of chemistry, who is succeeded by Dr. A. H. Lett, formerly of the University of Alabama.

Quarantine Withdrawn.—By proclamation of the governor, under date of October 17, on request of the State Board of Health, the proclamation of quarantine issued February 26, was revoked, annulled and withdrawn, except in so far as refers and applies to ports and places infected or suspected of being infected with the bubonic plague and Asiatic cholera; this proclamation to take effect November 1. The surgeon general of the United States Public Health and Marine-Hospital Service concurred in the action of the board of health regarding quarantine with the exception of Ceiba, where suspicious cases are said still to exist.

Hospital Reports.—During the first year the Woman's Dispensary, New Orleans, treated more than 1,000 patients. The only requisite for treatment is that the patient is too poor to pay. The medical staff is composed of Drs. Sara Tew Mayo, Clara T. Glenk, Susanna Otis, Elizabeth Bass, Cora M. Bass, Clotilde C. C. Jauquet and Edith Loeber.——The executive committee of the New Orleans Eye, Ear, Nose and Throat Hospital reports 542 admissions during September, 3,231 consultations, 80 operations and 46 emergency cases.——At a meeting of the board of the Touro Medical Infirmary, October 4, the superintendent reported that during September 94 patients were admitted, 98 discharged and 5 died, and that on October 1 there were 60 patients in the hospital. The 2,802 free consultations at the outdoor clinic were distributed as follows: Surgical, 3,633; gynecologic, 184; eye, 1,090; ear, nose and throat, 408; children, 82; internal medicine, 290; digestive diseases, 45; nervous and mental diseases, 26; skin diseases, 36; genito-urinary diseases, 34, and dental, 44.

MAINE.

Quarantine Station.—Plans have been approved for the new quarantine station at the north end of House Island, Portland, which will cost $25,000.

Typhoid Fever.—Because of the prevalence of typhoid fever in the towns north of Bangor, especially in Oldtown, where there are at least 15 cases, the Bangor physicians are advising special precautions to avoid an epidemic in that city.

New Wing for State Hospital.—The hospital trustees have recommended the construction of a new wing for the Eastern Maine Hospital, Bangor, to cost from $125,000 to $150,000. The trustees also recommended an appropriation of $2,500 to $3,000 to cover the needed improvements in the Summer Hospital for the Insane, Chase Island.

Medical Club Organized.—At a meeting of the physicians of Westbrook, the organization of the Medical Club of Westbrook was effected and the following officers were elected: President, Dr. Jacob L. Horr; secretary-treasurer, Dr. Louis L. Hills; and committee on by-laws, Drs. Albert H. Burroughs, George K. Woodman and Louis L. Hills.

Malpractice Suit.—We are informed that in the suit for malpractice by C. T. Ripley against Dr. Henry D. Worth, East Corinth, for $5,000, for alleged malpractice in treating a fracture of the plaintiff's leg, the jury decided in favor of the plaintiff, October 13, and damages of $1.00 were assessed against the defendant. The defendant claimed that the plaintiff had removed a plaster cast from the leg on his own responsibility and before the proper time.

MARYLAND.

The Criminally Insane.—Dr. Joseph C. Clark, superintendent of the Springfield Hospital for the Insane, has called on the lunacy commission for coöperation in preventing the commitment of the criminally insane to the state insane hospitals. The modern outdoor treatment allows the patient the utmost liberty and operates with good results, but if the insane with criminal propensities are added, it will be necessary to protect the patients against the criminally insane and also to protect the latter against themselves. The system would thus be disorganized. He quoted statistics to show that insanity was increasing. The institution at Springfield has 730 patients, who are engaged in outdoor employment on the farm, and 225 were added during the past year, several of the criminal insane class.

Honors for Dr. Hurd.—Dr. Henry M. Hurd, superintendent of the Johns Hopkins Hospital, was given a dinner by his colleagues at the Merchants' Club, November 1. He sailed for Europe November 5, on a year's leave of absence, and will devote several months to medical research. A lifesize portrait, by Chase, was presented to the board of directors of the hospital by the medical staff. Dr. William H. Welch presided at the dinner and made the presentation speech, dwelling feelingly and affectionately on Dr. Hurd's services to the hospital. The picture was received by Judge Harlan on behalf of the board. Dr. Hurd made fitting reply. Drs. Ira Remsen and Daniel C. Gilman also spoke. The portrait will be hung in the library. The menu contained a facsimile of it and its cover represented one of the *Johns Hopkins Hospital Reports*, of which Dr. Hurd is editor. There were 141 subscribers, from all parts of the country and even from abroad, to the dinner and picture. The committee of arrangements included Drs. J. M. T. Finney, H. M. Thomas, W. W. Russell, Thomas S. Cullen, R. H. Follis, T. B. Futcher, R. I. Cole and J. M. Slemons.

MASSACHUSETTS.

Can Not Explain Scarlet Fever Contagion.—Brookline has had a series of about 15 cases of scarlet fever, all occurring on the route of one milkman. Most careful examination of the employés, however, failed to show the source of the infection.

Personal.—Dr. Charles P. Sylvester of Boston has gone to Florida for a month's vacation.——Dr. Eugene A. Darling has been elected president, and Dr. John T. H. Nichols, treasurer, of the Cambridge Antituberculosis Association.

Diphtheria.—Diphtheria is reported to be epidemic in Worcester. On October 22, 52 families were under quarantine. The number of new cases for the week was 42, and since August 300 cases have been reported.

Wins Inspector's Post.—Dr. Alfred F. Downing of Cambridge has been appointed physical inspector for the state civil service commission, winning from 25 competitors in the examination held Oct. 17, 1906. Dr. Downing practices in Watertown, is a graduate of Harvard, the Harvard Medical School and of the Boston City Hospital.

Another Leper Found.—A man from Hyde Park, admitted to the Massachusetts General Hospital, Boston, for treatment for a skin disease, was considered a suspicious case, was isolated at Gallups Island, Boston Harbor, and later, when the disease was proved, was sent to the State Hospital for Leprosy on Penikese Island, Buzzards Bay.

To Check Public Spitting.—Beginning October 24, the police commissioner of Boston gave notice that he would strictly enforce the law against spitting on the sidewalks or floors of any city or town hall, any public library or museum, in any church or theater, in any lecture or music hall, in any ferryboat or steamboat, in any railway car or station, waiting-room or sidewalk connected therewith. The violation of this ordinance is punishable by a fine not to exceed $20.

Valuable Medical Library.—The medical books are being transferred from the Boston Public Library to the Medical Library on the Fenway. A card catalogue has also been made. A considerable number of medical journals, the property of the city, have been for some time at the library. The Cambridge Public Library has deposited its collection of medical books in the Medical Library, and other libraries in Boston are understood to have made similar arrangements. The title, under these circumstances, is vested in the original owner, with the right of recall at any time.

Cost of Leper Colony.—For the five lepers kept at the Isolation Colony on Penikese Island Buzzards Bay, for the first 14 months, the expense to the state was $49,043, the greater portion of which is to be considered as initial expense, including the purchase of the island, the building of cottages, etc. Dr. J. F. Lewis, superintendent of the Board of Charities of the State Adult Poor, estimates that an anual appropriation of $5,000 will be adequate for further expenses. He considers the first year of the experiment a success and claims that the plan is more economical than the old system of caring for lepers in scattered portions of the commonwealth.

Aid to Consumptives.—The tuberculosis camp maintained on the top of Parker Hill, Roxbury, since May 23, closed October 31. The average attendance each day this year was 50, as against 31 in 1905: July, 53; August, 58; September, 54; October, 45. One hundred and seventy-nine patients have been treated and have made a net gain of over 500 pounds. One man gained 44 pounds. Very few lost in weight. At the close 58 were provided for in various ways: the Good Samaritan Hospital, the Holy Ghost Hospital, and some to Rutland. Dr. Joseph H. Saunders has been the physician in charge. The charity is part of the work of the Association for the Relief and Control of Tuberculosis.

Personal.—Drs. Julius S. Clarke, Ernest S. Jack and W. M. Townsend have been elected members of the board of Melrose Hospital.——At the annual meeting of the trustees of the Massachusetts Charity Eye and Ear Infirmary, Boston, October 24, Dr. George B. Shattuck was elected president of the board of managers.——At the annual meeting of the Neighborhood Medical Club, composed of physicians of South Boston, Roxbury, Dorchester and Brookline, October 18, the guest of honor was Dr. John H. Sherman, South Boston, one of the oldest physicians of the state, who was presented with a silk umbrella.——Dr. Fred E. Jones, Quincy, has been nominated by the governor as medical examiner for Norfolk County.——Dr. Stephen A. Mahady, Hinsdale, has gone to Baltimore, and after a course of five months' study, will leave for Europe.

Elections.—The West Brookfield Medical Club held its annual meeting, October 17, as the guest of Dr. Alexander McNeish, Leicester. The following officers were elected: President, Dr. Emerson A. Ludden, North Brookfield; vice-president, Dr. Albert G. Blodgett, Ware; secretary, Dr. Charles A. Blake, West Brookfield; treasurer, Dr. F. W. Coles, and executive committee, Drs. Maurice W. Pearson, Ware; Olney W. Phelps, Warren, and Frederick J. Sanborn, Spencer.——At the annual meeting of the alumni of the College of Physicians and Surgeons of Boston, October 26, the following officers were elected: President, Dr. Procter K. Browne, East Milton; vice-president, Dr. Edward L. D. Turner, Boston; secretary and treasurer, A. B. Drake, Boston, and executive committee, Drs. Aaron H. Thomasson, Mary P. Putnam and Katherine A. Fenelon.

Typhoid Unusually Prevalent.—There are probably more than 1,000 cases of typhoid fever in the state. Serious outbreaks are reported in Arlington, Boston, Brookline, Brockton, Cambridge, Chelsea, Douglas, Easton, Everett, Fall River, Haverhill, Hyde Park, Lawrence, Lowell, Lynn, Malden, Marlboro, Medford, Monson, Natick, Needham, New Bedford, Newton, North Adams, Northampton, Oxford, Provincetown, Rockland, Salem, Somerville, Springfield, Waltham and Westfield. Thirty-five new cases and 5 deaths are reported in Boston for the week ending November 3. We have mentioned the infected milk source in Lynn, Needham, Natick and Wellesley. Another source has been found in Lynn, e. g., the spring water which is largely distributed to the factories. One supply coming from Moose Hill, Swampscott, has been analyzed by the State Board of Health and found unfit for drinking purposes and its sale is forbidden.

Praise Governor and Legislature.—For the first time on record the leading physicians of the state have signed a nonpartisan endorsement of the good work done by a governor and legislature along public-health lines. Editorial reference to this is made in this issue. Some of the specific acts to be credited to this year's administration of state affairs are as follows:

An act (Chapter 502) providing for medical inspection of all children in the public schools, for the exclusion of those suffering from infectious diseases; for annual or more frequent tests of sight and hearing, to the end that those suffering from all physical or mental defects thereof shall be guarded from injury, and shall receive the full benefit of the school work and secure the best educational results.

An act (Chap. 386), regulating the sale of "patent medicines" containing alcohol, opium, morphin, heroin or chloral hydrate, absolutely prohibiting the sale of those which contain cocain or its salts or alpha or beta eucain, and forbidding the sale of these latter drugs except on the written prescription of a registered physician, dentist or veterinary surgeon.

An act (Chap. 508), based on an inaugural recommendation, establishing a school for feeble-minded children, with a physician as superintendent and assistant physicians, one of whom shall be a

sician, which school shall be under the supervision of the State Board of Insanity and shall receive, maintain and educate indigent feeble-minded persons gratuitously, and others on equitable terms.

An act (Chap. 158), to prohibit the pollution of the Charles River within the boundaries of the metropolitan parks district by unpurified sewage, and another (Chap. 360), of the same purport concerning the Neponset River.

An act (Chap. 365), designed to lighten the possible burden of maintaining pest houses in each city and town by permitting any two or more adjoining cities or towns to establish and maintain such hospitals in common.

An act (Chap. 116), to prevent the misuse of milk cans and jars and to prohibit the shipment of cans containing offensive material to the producers of milk. This act has already done much to keep from public sale milk polluted by bacterial contamination, and thus to protect infant life to some extent from its chief cause of mortality, cholera infantum.

A resolve (Chap. 59), providing for an investigation of what unwholesome changes, if any, occur in the flesh of undrawn poultry.

A resolve (Chap. 96), providing for an investigation of barber shops and regulating and supervising their business in the interest of the public health.

MICHIGAN.

Personal.—Dr. George E. Sanford, Saline, has gone to the Harper Hospital, Detroit, for treatment.——Dr. and Mrs. Raymond D. Sleight, Battle Creek, have started for Europe.——Dr. Charles G. Jenkins, Lansing, has been elected a member of the local board of education.——Dr. Robert W. Alton, Portland, will spend the winter in New Mexico.

State **Board Meeting.**—At the quarterly meeting of the State Board of Health, held in Lansing October 12, the two questions pre-eminently before the conference were the matters of enforcement of the law as regards undertakers and embalmers and reciprocity in licensure of embalmers. The conference recommended the adoption of a plan that a person holding a license as embalmer in one state and desiring to practice embalming in another state, may procure a license from that other state by filing with the secretary of the board of health in the state where he desires to practice, a certified copy of the examination papers on which he received his license in his own state, and by securing from the secretary of his own state board of health a certificate to the effect that he is of good standing in his own state.

MINNESOTA.

Donations.—In response to the annual call for donations from St. Luke's Hospital, Duluth, about $3,000 in cash, in addition to generous supplies, was received.

Personal.—Dr. E. F. Murphy has been appointed first assistant city physician and Dr. David B. Hilger, second assistant city physician, of St. Paul.——Dr. Franklin R. Wright, Minneapolis, returned from Europe, October 12.

Hospital Notes.—The new Immanuel Lutheran Hospital, Mankato, was dedicated October 31, with impressive ceremonies.——The new Asbury Hospital, Minneapolis, with a capacity for 90 patients, was formally opened October 5, and is now in full operation.

Red River Valley Meeting.—At the quarterly meeting of the Red River Valley Medical Society, held in Crookston, Dr. Jacob S. Kjelland, Crookston, was elected president; Dr. J. Calvin Cummings, St. Hilaire, vice-president, and Dr. Herbert H. Hodgson, Crookston, secretary-treasurer.

Epidemics.—On account of an epidemic of diphtheria, the public schools of Rochester have been closed, Sunday schools and public meetings discontinued, and the public library has been shut up until further notice.——There are now reported to be about 20 cases of diphtheria in Duluth, the largest number at any one time in the city for several years.——An epidemic of ringworm has broken out in the schools of Fergus Falls.

Councilor District Meeting.—A joint meeting of the various component societies of the first councilor district, comprising the Park River Medical Society, Red River Valley Medical Society, Western Central Medical Society and the Clay-Becker Medical Society, was held in Moorhead, September 24. Mayor C. A. Nye delivered an address of welcome and read a paper on "Some Points in Medical Jurisprudence." A number of interesting papers were presented and the proceedings were closed by a banquet at which 50 physicians were present.

MISSOURI.

Contagious Diseases.—Two houses, near Independence, have been placed under quarantine on account of four cases of smallpox.——Diphtheria is reported to be epidemic in Oregon.

Car Hits Ambulance.—A St. Louis street car ran into a City Dispensary ambulance, October 7, causing the horses to run away, injuring Dr. E. Taake, the ambulance physician, and causing a collision with another ambulance, in which the driver was hurt.

Society Gives Banquet.—Jackson County Medical Society gave a banquet at the Coates House, Kansas City, October 18, in celebration of the twenty-fifth anniversary of its organization. Dr. Edward H. Thrailkill, the president, acted as toastmaster, and toasts were responded to by twelve members of the society.

NEW JERSEY.

Hospital Receives $5,000.—A woman brought to the Somerville Hospital after sustaining severe injuries in an automobile accident October 14, has presented the hospital with a check for $5,000.

Medical Inspection in Atlantic City.—The report submitted by Medical Inspector, Dr. Edward Guion, emphasizes the importance and necessity for a regular examining corps of physicians and trained nurses in the public schools of the city. Nearly 1,000 of the pupils examined were found not to have been vaccinated, and 425 were found to be suffering with various forms of eye disease.

NEW YORK.

Poisoned by Candy.—More than 50 children in West New Rochelle have been ill as the result of eating colored candy known as "jaw breakers," and one child has died. In every case the symptoms were the same, and the health department and police are making investigations.

Central New York Physicians Meet.—The Medical Association of Central New York held its annual meeting in Syracuse, October 17, at which the following officers were elected: President, Dr. William B. Jones, Rochester; vice-presidents, Drs. Carlton C. Frederick, Buffalo, and Paschal M. Dowd, Oswego; secretary, Dr. Clarence A. Greenleaf, Canoga, and treasurer, Dr. William M. Brown, Rochester.

Northern Association Meeting.—The Medical Association of Northern New York held its annual meeting in Malone October 9. Dr. E. S. McClellan, Saranac Lake, the president, delivered the opening address. The following officers were elected: Dr. William C. Smith, Winthrop, president; Dr. Percival F. Dalphin, Malone, vice-president; Dr. Alfred G. Wilding, Malone, secretary, and Dr. George H. Oliver, Malone, treasurer.

Examination of School Children.—The report of Dr. Joseph C. Palmer, chief medical examiner of schools in Syracuse, shows that during the first week in October, 119 schools were examined and 8,928 children examined, 47 of whom were excluded; 2 on account of scarlet fever, 3 on account of contagious skin diseases, 15 on account of skin diseases, 18 on account of pediculosis, 2 on account of whooping cough and 3 on account of mumps.

Rabies Prevalent.—Babylon, Long Island, has been considerably alarmed over the prevalence of rabies among the dogs in that section. The board of health convened in special session and passed stringent resolutions requiring all dog owners to keep their dogs under close watch; unless this order is obeyed the dogs will be shot. In New York City also the unusually large number of cases continues, 30 cases having been treated within a month. Cures have been effected in all cases that have been treated.

Loeb Home Opened.—After a year's preparation the Solomon and Betty Loeb Memorial Home for Convalescents, a short distance from Tarrytown, has been formally opened. The home consists of a central administration building, a cottage for male and one for female adults, and a children's building. The institution is non-sectarian and payment is asked of no one in straitened circumstances. A city office has been opened, where applications will be received and physicians, hospitals and philanthropic societies are requested to send desirable patients.

Hospital News.—Dr. Eugene H. Carpenter, Oneida, is about to erect a three-story hospital building in that city.——A free dispensary for Troy has been incorporated for the aid of the poor of the city who are in need of free medical treatment. Drs. Charles F. Kivlin and John H. Reid are the attending surgeons; Drs. Edward L. Lyons and Charles F. Archambeault, attending physicians; Dr. Thomas F. Judge, diseases of skin and clinician; Drs. Burton S. Booth and Frank M. Sulzman, diseases of the eye, ear, nose and throat, and Dr. Frank T. Stannard, genitourinary diseases.——Dr. James H. Glass, Utica, gave a reception, October 5, in honor of the nurses and physicians connected with the Faxton Hospital, at Graefenberg farm.——The new Ellis Hospital, Schenectady, was opened for inspection, October 12. The patients were transferred from the old building October 15.

New York City.

Typhoid on Ward's Island.—There has been a slight epidemic of typhoid fever in the Manhattan State Hospital for the Insane, on Ward's Island. The disease is now decreasing, as there are at present only 24 patients in the hospital.

Lectures on Consumption.—The board of education will give free public lectures on tuberculosis to adults in coöperation with the committee on the prevention of tuberculosis of the Charity Organization Society. Drs. Addison W. Baird, John B. Huber and S. Adolphus Knopf will be the lecturers.

Lectures on Diseases of the Skin.—It has been announced that Dr. L. Duncan Bulkley will give an eighth series of lectures on diseases of the skin at the New York Skin and Cancer Hospital on Wednesday afternoons, commencing November 7, which will be free to the medical profession.

City Tuberculosis Hospital.—The $225,000 which the board of health asked from the city for the purpose of building a hospital for the care of incipient tuberculosis at Otisville, N. Y., has been appropriated. The shacks for the patients will cost $80,000; the dining room and kitchen, $20,000; a barn for 40 cows, $18,000, and a power plant, $30,000.

Physicians Not to be Summoned to the Dead.—An order has been issued by the commissioner of police that when a dead body is found policemen will not send for an ambulance to have the body pronounced dead, but will immediately notify the coroner. Hitherto, according to the regulations, no man was ever considered dead until so pronounced by a surgeon.

Infirmary Election.—The seventeenth annual meeting of the Long Island Throat Hospital and Eye Infirmary, Brooklyn, was held October 2. During the year 2,296 cases were treated, 1,083 prescriptions were given and 387 operations performed. The following officers were elected: Dr. Charles T. Schondelmeier, president, and Drs. Rashid S. Baddour and D. Morris Woolley, trustees.

Milk Boycott on Staten Island.—Unless the board of health of the Northfield section of Staten Island extends the time allowed for the renovation of certain dairies, a great number of independent dealers in Staten Island will be forced out of business. The cost of rebuilding dairies in compliance with the law would be so great that the dealers are considering the advisability of going out of business.

Contagious Diseases.—There were reported to the sanitary bureau for the week ending October 27, 336 cases of tuberculosis, with 159 deaths; 238 cases of diphtheria, with 25 deaths; 127 cases of typhoid fever, with 27 deaths; 90 cases of scarlet fever, with 3 deaths; 51 cases of measles; 38 cases of whooping-cough, with 6 deaths; 11 cases of cerebrospinal meningitis, with 5 deaths, and 42 cases of varicella, making a total of 933 cases, with 225 deaths.

The Spread of Trachoma.—The menacing spread of this affection among the school children of Manhattan and Brooklyn continues and, according to the board of health, there is pressing need in New York City for at least two more hospitals where this disease can be treated. It is estimated that in some parts of the city as many as 75 per cent. of the school children are affected by trachoma, while in Brooklyn about 25 per cent. were affected, and there is need of at least one more hospital in that borough.

NORTH CAROLINA.

New Building Opened.—The new chemical building of the University of North Carolina, Chapel Hill, adds greatly to the facilities of the medical school. In the new building will be located the laboratories of pathology, bacteriology and physiology.

To Check Liquor Frauds.—The Cumberland County Medical Society, at a recent meeting, decided unanimously to petition the legislature to repeal section 4 of the prohibition law for Cumberland County, which permits the sale of whisky in drug stores on physicians' prescriptions. This extreme position appears to be the outcome of the disposition of "prohibition drinkers" who are willing to make free use of the kindly weakness of local practitioners to procure their daily drink.

OREGON.

Want Medical Library.—A committee was appointed by the Lane County Medical Society to negotiate for the establishment of a medical department at the public library, Eugene.

Leprosy Diagnosed.—Drs. Ralph C. and Ray W. Matson have decided that the diseased Chinaman who was taken from his home on Chapman Street, Portland, to the county poor farm, is afflicted with leprosy.

PENNSYLVANIA.

Typhoid in Pittsburg.—The report of the bureau of health shows that during the month of October 634 cases of typhoid fever, with 34 deaths, were reported in Pittsburg.

For Criminal Insane.—The commission has selected the site for the State Hospital for the Criminal Insane, at Far View, in Wayne County. The state has made an appropriation of $150,000 for this purpose.

Sold Unlabeled Poison.—R. H. M. McKenzie, a druggist of Pittsburg, and Frank Fleckenstein, his clerk, who were tried recently on the charge of selling bichlorid of mercury tablets without labeling the box containing the poison, were found guilty, and McKenzie is also reported to have been found guilty of selling the tablets for an illegal purpose.

Impure Milk on Pullman Cars.—Under the direction of Dr. B. H. Warren, dairy and food commissioner, the examination is made of food served in dining cars on all railroads leaving Pittsburg. As a result of this investigation 32 charges are to be brought against the Pullman Parlor Car Company. In each of these cases the specific charge wil be the use of formaldehyd in the milk and cream served in the dining service.

Typhoid Fever.—The health authorities report 25 cases of typhoid fever in the state, and state that the outbreak has been traced to an infected milk supply.——The Pittsburg board of health reports that the 30 cases of typhoid fever, which were reported during September in the Twenty-first ward, were due to infected water from one spring.——Cambridge Springs reports 10 cases of typhoid fever.——Pittsburg officials say that the increase in daily reports of typhoid fever, which amounted on October 12 to 35 cases, is due to neglect of the hospitals to promptly report the cases. Up to October 18, 325 cases had been reported in Pittsburg.——Typhoid fever has made its appearance in Summit Hill, where 7 cases are reported.——Two patients at the State Hospital for the Insane, Norristown, are reported to be ill with typhoid fever.

Philadelphia.

Addition to Hospital.—The contract has been let for the construction of a six-story addition to the Medico-Chirurgical Hospital, Eighteenth and Cherry Streets, to cost $80,000.

Hospital Bed for Teachers.—The public school teachers of Philadelphia have contributed $5,000 to endow a private room in Jefferson Hospital, to be known as the Lewis Elkin Memorial Room, which is to be at the free disposal of teachers needing medical or surgical treatment.

Results from Antitoxin.—The records of the Municipal Hospital show that not a fatal case of diphtheria has occurred where diphtheria antitoxin was injected during the first day of the disease. In cases where the injections were performed during the second day the average death rate was 4 to 5 per cent. Injections given on the third day had a death rate of from 13 to 17 per cent.

Personal.—Dr. David B. Birney, who was thrown from his carriage on October 13, was operated on October 22 for injuries sustained therefrom.——Dr. and Mrs. Alexander W. Biddle have returned from Japan.——Dr. Edward B. Meigs will spend the winter at Jena, Germany.——Dr. Robert Laigner of Paris is a guest of Dr. John L. Borsch. Dr. Laigner was for several years chief of Prof. De Wecker's clinic in Paris.——Dr. and Mrs. Frank H. Getchell have returned from Europe.

Mayor Plans New Hospital.—Mayor Weaver has planned to purchase ground for the erection of a hospital for the city's indigent insane patients, and an ordinance will be presented to the finance committee appropriating $261,000 for the purchase of 870 acres of ground in Byberry, in the Thirty-fifth Ward. The purchase of this property is recommended by the mayor, director of the health department, Dr. W. M. Late Coplin, and Drs. Charles K. Mills and F. X. Dercum. In his message the mayor states tnat in the Blockley insane department at the present time there are over 1,900 insane patients. The money for the construction of the institution is to come out of the proposed permanent loan of $13,500,000. It is the purpose of the authorities to erect buildings here and have at the same time ample ground for the inmates to till the soil, to be employed in other manual occupations, and thus bring in revenue which will help in their maintenance.

WEST VIRGINIA.

Hospital Completed.—The new hospital at Charleston has been completed and equipped. It has accommodations for 20 patients and is under the charge of Dr. Frederick S. Thomas.

Leper Not Cremated.—It is reported that Raschid, the Assyrian leper, was not cremated at Elkins. Lime was deposited in and around the grave, and the shanty he occupied was burned down.

Society Passes Resolutions.—At the meeting of the County Medical Society of Barbour, Randolph and Tucker counties, held in Philippi, October 3, the following resolutions were adopted:

WHEREAS, The growth and development of the organized profession in the past five years has made possible certain lines of activity heretofore out of the question; and

WHEREAS, The work undertaken by the various county and state associations, as well as by the American Medical Association, is in the interest of the public health and well-being; and

WHEREAS, Certain journals owned by private interests and conducted for personal profit have seen fit to attack and criticise the official journals of the organized profession for the work which is being carried on; therefore, be it

Resolved, That we, the members of the County Medical Society of Barbour, Randolph and Tucker Counties, do hereby express our approval and commendation of the position taken by THE JOURNAL of the American Medical Association regarding the advertising and sale of nostrums; and be it further

Resolved, That we hereby express our unqualified approval of the work of the American Medical Association, of the Board of Trustees and the officers of the Association and our confidence in them; and that we especially approve of and endorse the business foresight shown by the Board of Trustees in accumulating a surplus for financial emergencies and future expansion; and be it further

Resolved, That we hereby express our approval of the work of the Council on Pharmacy and Chemistry and urge that it continue its investigation into proprietary and secret preparations in order that the profession may be enlightened and the public benefited by the results of their labor; and be it further

Resolved, That we express the hope that the time will soon come when the American Medical Association will be in position to publish a large part of the medical books used by physicians; and be it further

Resolved, That we hereby express our unqualified disapproval and condemnation of the action of certain medical colleges in advertising for students in other than medical journals; and be it further

Resolved, That we hereby express our disapproval of the action of certai manufacturing pharmacists who have placed the facilities of certain manufacturing pharmacists who have placed the facilities of their plants at the disposal of quacks and vendors of nostrums; and be it further

Resolved, That a copy of these resolutions be sent to the *Journal of the West Virginia State Medical Association* and to THE JOURNAL of the American Medical Association.

WISCONSIN.

Pre-Medical Course.—Beginning with the present year, students of the pre-medical course of the Wisconsin State University, Madison, will take their first two years of work in the university. This has been made possible by the establishment of a department of physiology, of which Dr. Joseph Erlanger, formerly of Johns Hopkins School, Baltimore, is to be the head. A new course in physiologic chemistry has also been added under the charge of Prof. D. C. Bradley of Yale Medical School, and it is planned in the near future to establish departments of pharmacology and pathology. The department of anatomy is thoroughly equipped and under the charge of Professor Bardeen.

Hospital Items.—The contract has been let for the construction of the new Lutheran Hospital, Eau Claire.——Work on the new Montgomery Hospital is progressing. The structure will be four stories in height and modeled after the Augustana Hospital, Chicago.——The Scandinavian-American Hospital Company, Stoughton, has been dissolved, it is reported, and a site has ben purchased in Chippewa Falls for a new hospital, with accommodations for 40 patients, which will be ready for occupancy January 1.——Dr. and Mrs. Frederick Layton, Milwaukee, have donated to the Milwaukee Hospital a home for those suffering from chronic diseases, to be erected at an expense of about $30,000.

GENERAL.

New Electrotherapeutic Officers.—At the recent sixteenth annual meeting of the American Electrotherapeutic Association at Philadelphia, the following officers were elected: President, Dr. Morris Weil Brinkmann, New York; vice-presidents, Drs. J. D. Gibson, Denver, and M. K. Kassabian, Philadelphia; secretary, Dr. A. C. Geyser, New York; treasurer, Dr. Richard Joseph Nunn, Savannah, Ga.; executive council, Drs. William Benham Snow, Fred H. Morse and Francis B. Bishop.

Yellow Fever in Cuba.—Dr. von Ezdorf of the United States Public Health and Marine-Hospital Service reports that 7 new cases and one death from yellow fever occurred in Havana during the week ending October 16. The sanitary forces in Havana are to be increased. It is proposed to have 50 inspectors for oiling and under each inspector 4 men to do oiling of breeding places for mosquitoes. Fumigation of houses is now being more generally done with sulphur. Since the case and death from yellow fever which occurred at Cruces on Sept. 18, 1906, 3 other cases have have been reported from there as follows: One on October 8, patient died October 10; 1, October 13, found at Cienfuegos; 1, October 13, confirmed at Cruces. The chief quarantine officer for the island of Cuba directed a circular letter to all quarantine officers on the island, in which he recommends that an inspection of all vessels in the harbor be made daily; that in case a non-immune be found to have a fever such case be isolated and measure taken to destroy mosquitoes aboard the vessel. Three new cases of yellow fever (confirmed) occurred in Havana October 19.

CANADA.

Typhoid Fever in Ontario.—Twenty-five cases of typhoid fever are reported in New Toronto, a suburb of Toronto. The Ontario board of health has been called to deal with an epidemic of typhoid fever at Sudbury. The situation at the Canadian Soo is also said to be serious.

Typhoid and Tuberculosis at Saskatchewan.—Dr. Moore, secretary of the Canadian Association for the Prevention of Tuberculosis, has held a number of meetings in Saskatchewan in the interests of that association. The department of agriculture, which handles the health matters of the province, has assisted Dr. Moore and at many of the meetings their health officer, Dr. Seymour, has also delivered addresses on both typhoid fever and tuberculosis. The department has issued a small folder on the two subjects for general distribution.

The Deportation of Insane.—The dominion immigration act provides the authority for provinces deporting insane who have lived therein for less than two years. Ontario, under the supervision of its inspector of asylums, is carrying out this work in a systematic way. It is estimated that the province saves about $2,000 on each insane person deported, as in Ontario the cost per annum of maintaining a patient is $135 and the average life of one in the asylum 13 years. A transportation company must bear the expense of deporting those whom it brought in.

Hospital News.—A new sanatorium for consumptives to cost $27,000 is to be added to the establishments of the National Sanitarium Association at Weston, near Toronto. Two prominent citizens of Toronto have each contributed $10,000 of this amont for cottages.——The sixteenth annual meeting of the Foundling Hospital, Montreal, was held during the week ending October 20. Dr. Evans was re-elected secretary of the medical board.——The total number of patients treated in the Winnipeg General Hospital during the week ending October 20 was 365, 213 being men, 117 women and 25 children.

Personal.—Dr. R. E. McKechnie has returned home to Vancouver after spending two months in hospitals of eastern Canada and the United States.——Drs. J. F. W. Ross and Adam H. Wright, Toronto, have returned from attendance on the American Association of Obstetricians and Gynecologists, and from fraternal visits to Drs. L. S. McMurtry and Horace Grant of Louisville, Ky.——Dr. H. P. H. Galloway, formerly of Toronto but latterly of Winnipeg, has been appointed lecturer in orthopedic surgery in Manitoba Medical College.——Dr. W. W. Boyce, Belleville, Ont., has been appointed physician to the Institute for the Blind at Belleville.——Prof. J. George Adami, McGill University, Montreal, advocates the daily compulsory inspection of school children in that city, in order to detect incipient tuberculosis.——Dr. C. B. Coughlin, Peterboro, Ont., a newly appointed member of the Ontario board of health, has been appointed principal of the Institute for the Blind at Belleville, Ont.

FOREIGN.

Late Research on Syphilis.—Many of the men who have thrown new light on syphilis during the last twelvemonth gathered at Berne in September for the Ninth German Congress of Dermatology, and reported the results of their latest researches. Hoffmann, whose name was associated with Schaudinn's in the discovery of the *Spirochaeta pallida*, proclaimed that there can be no question as to the etiologic importance of this spirochete in syphilis, as it has been found by innumerable observers in syphilitic lesions and nowhere except in syphilis. Its delicacy and numerous twists distinguish it from other spirochetes; but the refringens has flagella as well as the pallida. He advocates systematic examination for the pallida as much as for the gonococcus. Neisser reported that only the primary sore and glandular involvement were observed on the lower monkeys inoculated with syphilis, while the higher ones developed the exanthem. Inoculations were positive with substance from the sclerosis and papule, sometimes also with blood, but never with sperm and milk. Inoculations from the spleen, marrow, glands and testicles all resulted positively.

The practical results of his extensive research are, to date, merely the use of serum in diagnosis in the clinic. The findings have been positive in 77 per cent. of 213 patients. Excision of the primary sore was successful in preventing infection in some instances, as late as after eight hours, but in others it failed, even when done within 10 minutes of the infection. He has found that rabbits are also susceptible to syphilis. In regard to preventive treatment, Metchnikoff affirmed anew his belief that inunction with a 30 per cent. calomel salve would prevent infection, citing the successful prophylaxis by this means of the medical student Maisonneuve and of Pirquet's patient. Neisser stated that occasionally infection was prevented after inoculation of monkeys by treating with 2 per 1,000 bichlorid or concentrated carbolic acid solution, but failure was the rule. General skepticism prevailed on this subject. Metchnikoff reported also that 20 passages of syphilitic virus through the rhesus rendered it harmless for the chimpanzee. Finger's communication on the subject of the susceptibility of syphilities to renewed infection confirmed the lack of infection when the virus was merely inoculated on the incised skin. The results, however, were strikingly different when the virus was implanted in a pocket in the skin. The inoculations resulted positively in 89 per cent. of the cases of primary syphilis; in 60 per cent. of existing secondary syphilis, and in 85 per cent. of the cases of existing tertiary syphilis.

German Ophthalmologic Congress.—The twenty-third congress was held at Heidelberg in August, and the Graefe medal was awarded to Ewald Hering of Leipsic, the physiologist, for his researches on the physiology of vision and color and light perception. The Graefe medal was awarded first to von Helmholtz and then to T. Leber, Hering being the third recipient and, like the others, not an ophthalmologist. The relations between trauma and parenchymatous keratitis were discussed from opposite points of view, the subject being left undecided. Holth of Christiania called attention to the fine results sometimes attained in treatment of glaucoma when the supposed mishap of a fistula in the iris followed. He suggests the systematic making of a fistula into the iris in treatment of glaucoma, and has tried it in the clinic, with highly satisfactory results. Several speakers warned against trusting too blindly to Schirmer's intensive mercurial treatment of infected injuries of the eyes. It has saved many otherwise doomed eyes, but is not a certain preventive of sympathetic ophthalmia, and too conservative measures may result disastrously. It was reported that experimental research on the application of Bier's artificial hyperemia in treatment of eye affections did not give very encouraging results. Onodi of Budapest discussed the close anatomic connection between the nose and the eye, showing that a nasal affection with involvement of the sinuses could easily spread to the eye, and even a contralateral affection of the optic nerve is possible with a unilateral rhinologic affection.

Malaria Prophylaxis in Ceylon.—Ceylon's 4,000,000 inhabitants, according to the *Lancet*, maintain a fair standard of health, to which happy condition a climate almost unsurpassed for variety does much to contribute. Malarial fever is one of the scourges of the island, and last year the Northwestern and Sabaragamuwa provinces suffered in this respect more than usual. The experiment of administering quinin regularly as a prophylactic, already tried with some success on the prisoners in Mahara and Mutwal jails, was extended to an area in the Northwestern province. Of 232 villagers who were treated with quinin 36 (or 15.5 per cent.) suffered from malaria, while of 210 boutique-keepers and 24 villagers who were not treated with quinin 140 (or 66 per cent.) of the former and 12 (or 50 per cent.) of the latter suffered from malaria. The number of people in the village was 466. Commenting on the matter in an introductory note to the report on Ceylon, issued by the colonial office, the governor, Sir Henry A. Blake, states that he has arranged with the principal civil medical officer to extend this experiment to all malarial districts during the present year by grouping the villages and sending to each group an itinerant dispenser, who will administer quinin at regular intervals during the malarial season, while all schools will be similarly treated. The result of the experiment can not fail to be interesting, he declares, and he hopes that it will be satisfactory.

International Medical Association of Mexico.—The second annual meeting of this association is to be held in the City of Mexico, November 14 to 17. Eight sections have been arranged, including one for life insurance and one for obstetrics. The program is printed both in Spanish and English, and the addresses are in either language. R. D. Robinson of Torreon, Coahuila, is president of the organization, and W. R. Jamieson of the same place is secretary and treasurer. Communications are announced on "Conservatism in Surgery," by R. H. L. Bibb of Saltillo; "Treatment of Gas Burns," by Hill Rowe of Las Esperanzas; "Burns," by H. Payne of Sabinas; "Rubber in the Fenestrating of Compound Fractures," by H. Crouse, El Paso; "Pneumonia," by S. H. Hodgson of Bridgeport, Ala.; "Ichthyol in Erysipelas," W. C. Fallebert, Celaya; "Eyestrain," and "Principles of Feeding in Enteric Fevers," by the president; "Technic of Urethral Dilatation," F. C. Valentine, New York, and "A Few of Nature's Cures," by C. E. Husk, Santa Barbara, Ch.

Boas' Retirement.—The *Deutsche med. Wochschr.* states that I. Boas has handed over his private polyclinic to his assistants, Elsner and Ury, and now retires from further connection with it, giving up his classes. To commemorate his 20 years of work in the polyclinic, since he founded it in 1886, he has collected the 126 articles and monographs written by himself and his assistants and pupils, and has published them in two volumes, entitled "Gesammelte Beiträge aus dem Gebiete der Physiologie, Pathologie und Therapie der Verdauung." In the course of these 20 years he has published four manuals on the diseases of the stomach and intestine, and he has trained about a thousand pupils. His work has been done exclusively on private initiative, without aid or support from any official institutions. Our exchange adds that this record should certainly give Boas more satisfaction than the empty title of professor which the authorities have always denied him.

Tenth Annual Medical Congress of Roumania.—This congress was held at Bucharest recently with about 200 physicians in attendance. It was organized by the national medical association of the country, and the public authorities were well represented. Leonte, the president of the congress, referred to the 32 new hospitals recently erected by the king in the rural districts, and to the modification of the pension law extending its privileges to medical men occupying official government positions. The scientific work being done by some of the Roumanian physicians, especially Marinesco and others at Bucharest, is of the highest order.

Will Blacklist Authors of Write-ups.—The blacklist which the German Medical Press Association proposes to get up is to contain the names of authors who contribute "write-ups" for pay, and of those who publish an article, even though its style is changed slightly for the occasion, in more than one journal without the knowledge of the publishers. The association asks that such articles be not referred to in any way by the medical press.

Additions to a Glasgow Infirmary.—The Western Infirmary, Glasgow, appeals for funds for a further extension in addition to the new wing which was recently opened and which accommodates 70 patients. There are reported to be over 500 patients waiting admission.

French Investigator in Java, Siam and Burma.—Dr. de Beurmann, in charge of a service at the Saint Louis Hospital, Paris, has been commissioned by the French government to proceed to the Orient to study syphilis and leprosy.

LONDON LETTER.

(From Our Regular Correspondent.)

LONDON, Oct. 20, 1906.

Mr. Jonathan Hutchinson and the Outbreak of Leprosy in Switzerland.

Mr. Jonathan Hutchinson's indefatigable industry in endeavoring to convince people of the truth of his well known fish hypothesis of the causation of leprosy is once more in evidence. To his recent journeys of investigation in Africa and India he has now added a short visit to the Rhone Valley to investigate an outbreak of leprosy there. The result of his inquiry has been to confirm prognostication which he expressed previously in the *Times*. He finds that in the villages in which the disease is present cured fish of poor quality is imported and eaten in considerable quantities. It is consumed not by the well-to-do, but by the peasants. It is imported to add something savory to the vegetable diet of the fast days, especially of Lent. He hopes soon to be able to supply custom-house statistics as to the quantity of cured fish imported into the Valais. He already knows that it is large and of two qualities—high class and coarse—and that the latter makes up the bulk and entirely goes to the peasants. It consists chiefly of herrings, but "stock fish"—that is, dried cod, tunny or some large fish cut up into blocks—are also used. Another fact which he regards as ominous was disclosed: The fish comes only in the winter and spring months, because it will not keep in warm weather. There is every reason to believe that the development of railroads has much increased the supply. That the supply on the present scale is recent may

be inferred from the fact that it is not known of except on the spot. Mr. Hutchinson was assured in the most positive terms before reaching Leuk that there was no fish eating by the Swiss peasantry. They were said to be too poor to buy the imported article, while the fresh fish of the streams are too valuable for the peasantry to think of eating them. He was told it would be useless to seek fish eaters in the mountains. His informants were leading physicians in the cities and high officials who believed themselves well informed. Not until he got to Leuk itself had he any hint as to the reality. When he got there it was with the belief that it was hopeless to expect to obtain any direct evidence in support of the fish hypothesis of leprosy. In India a precisely parallel experience reportedly fell to his lot. When the custom-house officials in Berne, at his request, for the first time, attempted to estimate the quantity of fish destined for the Valais, they were astonished. There are no cases of leprosy in the town of Leuk itself, but in two or three of the adjacent villages. All were comparatively recent, none of more than five or six years' duration. The little village of Guttet, in which the cases of leprosy have recently been recognized, is on the mountain side, nearly a two hours' climb above the town of Leuk, and contains about 200 inhabitants. The chalets are neat and comfortable. There was not the slightest reason for suggesting that either poverty or neglect of cleanliness had taken any share in producing the disease. It is doubtful how long leprosy has existed there. Its medical recognition dates back only ten years. But the two families in which alone it occurred until quite recently may have had cases nearly half a century ago. At any rate, none of the more remote cases has survived. Of the present 4 cases one patient is not related to either of the families concerned and a fourth had no connection with the village. On the supposition that the disease has been present in two families in Guttet for 50 years without spreading to others, the facts are much better explained by the hypothesis of commensal communication than that of contagion in the proper sense. It has been suggested that the cases are a survival from the middle ages. Mr. Hutchinson agrees with Prof. Jadassohn, who has twice at the request of the Swiss government, examined the facts, that this is a most improbable supposition. Mr. Hutchinson thinks that in consequence of the use of decomposing fish the Swiss Catholic cantons are incurring the danger of leprosy.

Plague Investigations in India.

The commission appointed by the government to investigate plague in India has issued a highly important series of reports. Apart from the comparatively rare pneumonic form, ordinary plague is found not to be particularly infectious, and man-to-man infection plays no important part in the spread of epidemics. Plague, nevertheless, may be introduced into a new locality by the agency of man and the agent need not be a sufferer from the disease. Definite localities, such as huts or rooms, in which plague has occurred among rats and men during an epidemic, are highly infectious. Persons living or sleeping in such places are liable to contract the disease, although similar close attendance on a plague case in a hospital or temporary camp is seldom dangerous. The infection clings to the described localities, and with such tenacity that persons returning to them a month, or in some cases as much as 48 days, after they have been evacuated have promptly contracted the disease. Plague can exist and spread under a great variety of climatic conditions, but when once it has become endemic it exhibits a marked seasonal prevalence. Bombay, for instance, is never free from plague, but the incidence is relatively small from June to December. In January and February the number of cases rises, at first slowly, then rapidly, and reaches a maximum in March and April, to fall again rapidly in the latter half of April and in May. During the first named period the number of cases a month may be from 50 to 500, but during the height of the epidemics it may range from 4,000 to 7,000. In other parts of India the yearly outbreaks have shown similar periods of prevalence during particular months, with complete or almost complete disappearance at other times, but the months of prevalance in different localities are not always the same. In the great majority of instances the outbreak of plague among men is associated with and generally preceded by, an epidemic among rats. There are the strongest reasons for regarding the epizoötic as being the most important cause of the epidemic spread of the disease. As to the part played by the flea in conveying the disease from rats to man, most important experiments have been made which include a careful anatomic examination of the suctorial apparatus of the flea. It appears that the insect, after making and enlarging its skin puncture, injects its saliva into the wound through one channel of its proboscis and withdraws blood through another. As in the case of the leech, the injection of saliva presumably prevents coagulation of the blood with which it mingles, and may afford a means of injecting the bacilli of plague, although these have not yet been detected in the salivary glands. The rat flea of India, unlike that of Europe, feeds readily on human beings. Guinea-pigs allowed to run free in plague-infected houses attracted a large number of fleas, mostly rat fleas, and 29 per cent. of them died of plague. The same results followed in houses which had been disinfected in the ordinary manner. Fleas transferred from plague-infected rats found dead or dying in houses transmitted plague to healthy animals. Caged animals were placed in plague houses in pairs, completely protected from soil and contact infection, and equally exposed to aerial infection, but one of each pair was protected from fleas and the other not. None of the protected animals contracted plague and several of the unprotected ones died from it. Among the fleas arrested and caught by the protective apparatus a certain proportion were found to contain in their stomachs abundant bacilli identical with plague bacilli. Another series of experiments showed that plague bacilli suffered no diminution of virulence in passing through the bodies of several successive rats, but that many of the Bombay rats are, comparatively at least, insusceptible to the plague virus, possibly because they have recovered from the disease. The blood of infected rats was found to contain an enormous number of plague bacilli, as many as 100,000,000 per c.c. being found before death. Finally, the existence of what is described as chronic plague was demonstrated in rats caught in previously infected localities during periods of general subsidence of the disease, showing that plague in an unsuspected form may linger in the rat population and may again spring into virulence among them under the operation of unknown causes. The whole of the experimental work appears to have been conducted with great skill. Evidently the government of India is sparing no effort to cope with the disease.

Medical Supervision of Children.

At the second meeting of the newly founded British Child Study Association an important discussion took place on "The Medical Supervision of School Children." Dr. Macnamara, M.P., presided, and said that he considered the necessity of bringing the trained nurse and physician into direct touch with the child in the slum school of inconceivably more importance than the problem of the religious formulary to be imparted. The present education bill takes a most admirable step, he said, in providing for the compulsory medical inspection of children on admission to a public elementary school. These views were confirmed by the other speakers.

Sanatoriums for Postal Workers.

The postal branch of the National Association for the Establishment and Maintenance of Sanatoriums for Workers Suffering from Tuberculosis has held a conference. The association is building a sanatorium at Benenden, Kent, where an estate of 252 acres has been acquired. Fifty-two beds have been taken by various societies of workers. The object of the conference was to consider the proposed rules of the postal branch of the National Association. The postmaster general has consented that subscriptions be collected by means of deductions from salary. The number of subscribers has now reached 32,000. Twenty-five beds have been engaged in the projected sanatorium at an annual cost of $8,000. The income of the society provides ample funds for this purpose and leaves a good surplus for cases of emergency.

The Prevalence of Dysentery in Asylums.

The report for 1905 on asylums contains a most disheartening account of the prevalence of dysentery in these institutions. The disease shows no signs of diminution. In 1905 there were under treatment no fewer than 1,106 cases, of which 247 were fatal.

Naso-sinusal Heredity.—Bichaton (*Rev. Hebd. Laryngologie* xxvii, No. 25, June 23, 1906), reports five observations of sinusal disease with history of similar conditions in parents, and holds that they can not be considered as simple coincidents of heredity. They seem to him to indicate a special transmitted tendency to inflammations of the sinusal mucosa which not only renders the subjects specially liable to such inflammations, but also renders their lesions less amenable to treatment. Two of his cases were specially striking as regards this latter point.

Correspondence

Interstate Reciprocity and Frauds in Medical Schools.

DETROIT, Oct. 20, 1906.

To the Editor:—Owing to the importance of the subject involved, it seems necessary for me to reply briefly to the communication of Mr. William C. Tait, attorney for the California State Board of Medical Examiners, which appeared in THE JOURNAL, October 6. Dr. Dudley Tait, his brother, and a member of the above board, in THE JOURNAL, September 1, called attention to a phase of interstate reciprocity involving fraudulent or defective diplomas, and assumed in the administration of medical reciprocity that all diplomas, including fraudulent and defective ones, were received as *prima facie* evidence (more properly, final evidence) of qualification. In my reply, September 15, it was shown conclusively that the administration method employed in reciprocity in going behind the certificate presented for endorsement, should make absolutely impossible the acceptance of a fraudulent or even a defective diploma in reciprocity.

So far, so good. But Mr. Tait, the lawyer, replies for Dr. Tait, the board member, and attorney-like, attempts to cloud the issue by extending the question of fraud and defect to the administration acts of members of state medical boards, and explains at length the method adopted in California to prevent unfairness and dishonesty on the part of the members in their duties as an examining board. In this connection he admits that the method employed in reciprocity, of going behind the certificate to prevent fraud and to eliminate defects in so far as medical diplomas are concerned, is a sound one, but suggests that the process of investigation should be extended to the official acts of state board members.

This suggestion of Mr. Tait is begging the question. The main object of medical reciprocity is the "elimination of the repetition of the tests of qualification." If the methods and reputation of a medical faculty were such that it would be advisable to have the examination questions and answers submitted to a board as a basis for recognition, then it were better not to recognize the college. And if likewise, the methods and standing of a state medical board were such that the questions and answers should also be submitted as a method in the administration of a reciprocity agreement, it were also better not to have reciprocity with such a state. It certainly would not be an equitable method to require from the board members evidence of honesty, competency and fairness, and not require from the faculty evidence of a like nature. Mr. Tait limits his suggestion to the members of the State Board of Medical Examiners.

Mr. Tait also discusses the reciprocity clause of the California statute. He states:

> It may interest the profession to know that the reciprocity clause of the California statute was before the Supreme Court of that state in the case, ex parte Gerimo, decided on in 1904. Counsel of Gerimo, an ex-judge of the court, attacked the law on the ground of the alleged unconstitutionality of the clause in question. Dr. Harison himself has pronounced against the constitutionality of the particular clause, assigning as his reason that it fails to recognize the so-called rights of practitioners licensed without examination under the former legislation of other states. This objection was directed by the ex-judge against the entire act. The Supreme Court, however, brushed the objection aside, holding that the reciprocity provisions were not an integral part of the statute; that they might be unconstitutional without impairing the validity of the remainder of the act, in which event, the court declared, the effect would be to subject all applicants to the examination. Of course, if Dr. Harison is right in his contentions that the provision for reciprocity is unconstitutional, then all hope for reciprocity between California and her sister states is, under present conditions, gone, for certainly the board of examiners can not, at the instance of the enthusiastic apostles of that system, make the statute constitutional.

It is to be noted that the court did not pronounce the clause in question constitutional or unconstitutional. It was contended that the clause was unconstitutional, and therefore impaired the validity of the whole act. The court held, however, that the clause might be unconstitutional without invalidating the act itself. There was no necessity for the court going further in the matter in this particular case; but if the question of constitutionality of the reciprocity clause nad been the direct issue, the court could have eliminated the restricted interpretation put on it by the California medical board, and therefore could have extended the intent of its meaning, purging it of the present retroactive quality given it by the board. I have never contended that the clause itself was unconstitutional, but rather that the interpretation given it was unconstitutional.

Mr. Tait states that California has never favored medical reciprocity from the fact that she considers absolute reciprocity a surrender to state sovereignty, and individual or restricted reciprocity too hard work and involving too much conscientious fulfillment; and so, therefore, he agrees with Dr. Harvey's "dangerous tendencies and doubtful advantages of reciprocity." The hard work and conscientious fulfillment kind of reciprocity is the method in force in some twenty-five states against which Mr. Tait and his friends, including Dr. Harvey, are directing their shafts. Mr. Tait accuses me personally of not reporting to his board, as invited, the fraudulent diplomas presented to my board. Since receiving the invitation to report, I have not had a fraudulent diploma presented. I wrote of rejecting defective diplomas—defective from the point of view that they did not fulfill the required standard. If the California board lives up to the standard of the Association of American Medical Colleges, it also should have received defective diplomas as distinguished from fraudulent diplomas.

On the presentation of a fraudulent diploma, I should consider it my duty not only to furnish the several medical boards in the United States with a record of such diplomas, but I should also furnish the directory department of THE JOURNAL with like information. And in this connection I would suggest that all information concerning applicants likely to be of interest to other boards, should be sent to the directory department of THE JOURNAL, as it has volunteered, without expense to the boards, to keep a card index covering such matter and to furnish all such information to the boards on request.

Before accepting an applicant from another state, especially when such an applicant has been in practice, a routine inquiry should be sent to the directory department, as well as to the secretary of the state board of which the applicant is a licentiate. This applies to ordinary registrations as well as to registrations involving reciprocity. B. D. HARISON

Treatment of Paroxysmal Tachycardia.

BALTIMORE, Oct. 29, 1906.

To the Editor:—I should like to correct some false impressions that might be caused by your review (Oct. 27, 1906, page 1417, paragraph 58) of my article on "Paroxysmal Tachycardia." In the review it appears that "Hirschfelder reports a case of paroxysmal tachycardia in which the patient's condition was improved very much by the administration of 2 *mg. atropin* within two hours. The drug was used in *5-minim doses of the tincture*, repeated once or twice at half-hour intervals."

The statement appearing in the original article (*Bulletin of the Johns Hopkins Hospital*, vol. 17, p. 339) was, however, that, in order to determine whether or not the vagi were in tonic activity *between attacks*, the patient was given (between attacks) 2 mg. atropin to paralyze the vagus endings. This, however, failed to bring on an attack or even increase the pulse rate; indicating: First, that in this patient the vagi were not in tonic activity; seondly, that something more than paralysis of the vagi was necessary to bring on an attack.

Even the stimulation of the accelerators produced by mild exercise while the vagi were still paralyzed by the atropin did not bring on an attack. So that, the mechanism underlying the paroxysms of tachycardia could not be definitely determined—but attention was called to the fact that "all the means that have been used successfully to suppress the attacks—viz.: ice bag to the heart, deep inspiration, galvanism to the vagus nerve in the neck, digitalin, pressure on the vagus—depend for their efficacy on the direct or reflex stimulation of the vagus. As might be expected from the uncertainty of their stimulating power, the results of these methods have been uncertain and variable. The one drug which exerts the purest and most certain action in stimulating the vagus, viz., aconite, so far as I learn, has not been used.

"Our patient has no further attacks from March 15 to his departure from the hospital on March 25, and as no other cases

of paroxysmal tachycardia have been available, the use of this drug" (*aconite*, emphatically not *atropin*) "in small doses (5 minims of the 1900 pharmacopeial tincture once or twice at half-hour intervals) can, therefore, only be suggested for the present."

ARTHUR D. HIRSCHFELDER.

Bad English.

PHILADELPHIA, Oct. 30, 1906.

To the Editor:—May I call attention to two very common instances of faulty English which I am constantly meeting in letters, in print, and in conversation? One is the assertion that "the patient had no temperature." I presume that the writer does not mean that the patient's temperature was zero, but that he had no rise of temperature beyond the normal. Certainly a temperature of 98.4 F. is universal in the well. Any rise above that should never be called "temperature," but a "rise of temperature," or "no increase of temperature." If temperature falls below 98.4, to 97 or 96 F., how would those who speak of any rise above 98.4 F. as "temperature" designate such a fall—"less than 'no temperature'"?

The other instance is really an atrocious misuse of the language. I constantly hear it used orally. In a recent letter occurred the phrase, "since my case, I have seen two others operated;" and in a single number of an admirable, well-known medical journal occur the phrases "the first case to be diagnosed or operated in P———," "three further cases have been observed and operated here," and two other similar transgressions.

May I call attention also to a confusion of two similar terms? "Tubercular" and "tuberculous" are constantly used interchangeably. At the last tuberculosis congress in Washington I proposed to the executive committee that we should recognize definitely in all our publications a distinction between the two words as follows: *Tuberculous* shall be used only of those lesions caused by the tubercle bacillus. *Tubercular* shall be used in describing those lesions which resemble tubercles, but which are not caused by the tubercle bacillus, for instance, tubercular syphilid, etc. This suggestion was adopted and the proposed usage approved.

I hope that editors will do us the favor of correcting such errors.

W. W. KEEN.

[We wish Dr. Keen had included in his condemnation the expression: "Three cases recovered and one died."—ED.]

Miscellany

EXPOSURE OF QUACKS.

How the Fake Doctors of Cleveland Extort Money and Deceive Patients.

Representing the *Cleveland News*, Mr. Charles S. Stuart has been carrying on an investigation of quacks and quackery in Cleveland, Ohio. The *News* began this investigation to protect the people of that vicinity by giving publicity to the processes by which these quacks extort money from patients, and to bring to the public a realization of the terrible menace to the young and ill-informed in the advertisements put forth by these "eminent specialists" and published in newspapers accessible to every member of the family. The ultimate object is to rid Cleveland of quackery. The results of Mr. Stuart's investigation have been published in the *Cleveland News* for several weeks past.

PRACTICE UNDER ASSUMED NAMES.

One of the first cases investigated by Mr. Stuart is that of Dr. Charles A. Duff. In the *Cleveland News*, October 15, Mr. Stuart says: "He is not Dr. Charles A. Duff. He is a medical college graduate, but practices medicine under an assumed name. In reality he is Dr. Carey Sargeant Ferris, and had the postal authorities known of his true identity, probably his mail would have been stopped long ago. . . . His certificate giving him the privilege to practice in Cuyahoga County is No. 6379 in the Probate Court clerk's office. The records say that he was graduated from Miami Medical College of Cincinnati April 1, 1892. It was a sad day for the public. In October, 1896, he was licensed by the state to practice medicine in Ohio. He was recorded in Cuyahoga County May 29, 1903. He also is recorded as a practicing physician in Hamilton and Montgomery counties. This record gives him the name of Carey S. Ferris." Shortly after his graduation "Ferris went to Toledo as the employé of a fake medical concern. He received something like $15.00 a week. Then he went to Ft. Wayne, Ind., as an employé of the State Medical Institution, which was conducted by L. A. Morlan. He (Morlan) came to Cleveland and brought C. Sargeant Ferris with him. C. Sargeant Ferris was a high sounding name. It looked good when Morlan purchased it from Ferris at $40.00 a week. . . . It was then the C. Sargeant Ferris Medical Company. . . . Ferris was at first in charge of the correspondence, . . . that is to say, when a poor victim wrote in, Ferris' duty was to size up the letter and mark it with hints of the kind to lure the dupe on." Mr. Stuart states that the picture of the supposed Duff which daily appears in the papers is that of a Dr. Duff in Rochester, N. Y.

SOME QUACKS POSE AS REPUTABLE PHYSICIANS AT THEIR HOMES.

The next case investigated by Mr. Stuart was that of Dr. Emil J. Rose. He says: "In his offices, 158 Superior street, he is Dr. Justin, French specialist. At his home in the Bolton Apartments, Bolton avenue, he is Dr. E. J. Rose. On the Cuyahoga County Medical Register he is Dr. Emil Justin Rose. This is a pretty and artful manipulation of names and gives Rose an opportunity to pose and practice in the neighborhood of his home as a reputable physician and smoothly to take the money away from poor dupes urged into his net by disgraceful advertising in his downtown offices." Mr. Stuart continues, "the standing of Rose with the rest of medical frauds is a peculiar one. He is said to be the stingiest of them all. He does not even employ an assistant in his offices, though he is reputed to get a prize portion of the 'suckers' some newspapers send to 'quackdom.' It hurts him, so it is said, to part with a penny. With some others it is 'easy come, easy go.'"

"Dr. 'Erwin' is another of the chiefs of 'quackdom' who is ashamed to reveal his true identity in the indecent advertisements he flaunts before the public. He is Dr. Alexander Erwin Mintie, and for years he has resided at 107 Brookfield street under that name. In the city directory he appears as Alexander E. Mintie, perhaps a further attempt to conceal from the public at large the fact that at 211 Superior street he is Dr. Erwin. I said that Dr. Mintie is ashamed to reveal his identity in his advertising. He frankly admitted this fact to me Wednesday morning."

VICTIMS TOLD THAT THEY HAVE PRIVATE DISEASES.

"Since the *News* first turned the limelight on the Cleveland leeches who call themselves doctors, and placed the fraud brand on them, I have had opportunity to learn something of the little, inner tragedies of life which follow the visit to the office of Dr. Quack. By letter, postal card, telephone and personal visit the stories of the victims of the quacks come to me. Most of these are given in confidence. I said in Article I that the greatest fortification behind which these doctors hide is the shame which they force on their patients. When a patient leaves the office of Dr. Quack it is practically an assured fact that he will speak to no one of what he has been told. It would bring blushes to the cheeks of even the most brazen. For that reason I can say that I am only surprised at the number who have volunteered to come boldly to the front and tell of their experiences."

Mr. Stuart continues, "Dr. Carey Sargeant Ferris, representing himself as Dr. Charles A. Duff, gave me a guarantee to cure me of 'Prostatic Nephritis,' a disease unknown to medical science. Dr. Charles A. Duff now emphatically advertises that he treats all patients personally, which is true, since the real owner of the Duff office, in the face of the *News*' exposé, brought Duff post haste to the office to take charge. Duff advertises that he has competent assistants to assist him. It is admitted that one of these assistants now is Carey Sargeant

Ferris, practically a self-confessed fraud. Dr. Duff advertises that should he take the whole burden of treatment on his own shoulders he would break down under the strain of overwork. But Duff has been working here only since the *News* exposed the office which bears his name. Duff advertises honest treatment and quick cure, but in my case his impersonator decided it would take weeks to cure me of ailments of which reputable doctors said I was free. Duff wants to know if it is not better to trust him with a case in which he makes a specialty than the family physician, and he is given his answer."

A REFORMED QUACK CONFESSES HIS BUSINESS PRINCIPLES.

In the Cleveland *News*, October 22, is published an article which is said to be written by a reformed quack. He says, "Here are a few brief and essential axioms of the business. Get the money. Get it all. Everybody and anybody is in bad physical condition on the first visit to your office. There is no exception to this rule. At times it is wise to cure a person of one ailment, but never fail to find another of serious nature before establishing the cure of the first. This policy is a great money-getter. Nobody is ever completely cured of everything. Bleed the sucker until he dies or until he will absolutely no longer be coerced into your office. Always be busy in your private office when the victim comes in, for five or ten minutes waiting in the reception room both impresses and frightens the patient. Be fairly affable in greeting. Learn as soon as possible how much 'cash' the sucker has and in what capacity he earns a living, or, in a word, how much he can afford to pay. Then multiply this amount by two. Always let the light shine full on the face of the patient and keep your own in the shadow. While so situated paint graphically the horrors of the various ailments with which you tell him he is afflicted. Keep this up until you see a flash of fear on his face. Then dilate further on the horrible character and inevitable termination should he not treat with you of the disease which brought the fear to his eyes. Now is the time to get the money. Get the fee for professional services all cash or as soon as possible, and then soak it to him for the medicines. Don't be afraid to say that you can cure everything and anything, and give a 'legal' guarantee for the same. Lastly, never bring your heart to the office with you. It is not a money-getter."

Association News

NEW MEMBERS

Of the American Medical Association for the Month of October, 1906.

ALABAMA.

Carraway, C. N., Pratt City.
Casey, E. S., Birmingham.
Donald, T. C., Bessemer.
Farley, A. J., Leeds.
Moore, Zadoc, Lamison.
Morgan, J. R., Shelby Springs.
Sankey, H. J., Nauvoo.
Sibley, B. D., Birmingham.
Treadwell, H. P., Hartford.

ARIZONA.

Swetman, C. R. K., Prescott.
Wiley, H. D., Metcalf.

ARKANSAS.

Chastain, J. S., Prescott.
Furbish, L. P., Laconia.
Johnston, Wm., Hardy.
Smith, E. D., Gilham.

CALIFORNIA.

Eklund, O. E., San Francisco.
Fisher, A. L., San Francisco.
Hamilton, Jos., Fruitvale.
Hulbert, R. G., San Diego.
Morrison, M. A., Fowler.
Norton, Thomas, San Luis Obispo.
Pounds, T. C., San Bernardino.
Smalley, C. A., Los Angeles.
Smith, W. O., Alameda.
Snook, John, Berkeley.
Stafford, A. M., Corona.
Van Denburgh, J., San Francisco.
Waldeyer, Wilhelm, San Francisco.

COLORADO.

Albi, Rudolph, Denver.
Friedman, Emanuel, Denver.
Geiger-Yont, Kate E., Denver.
John, G. H., Denver.
Johnston, W. W., Wray.
Kennedy, J. D., Denver.
McDonnell, J. J., Pueblo.
Morrison, C. S., Colorado City.
Robinson, W. W., Loveland.
Rupert, J. K., Alamosa.
Slopansky, F. R., Denver.
Strong, J. A., Sterling.
Tennant, C. E., Denver.

CONNECTICUT.

Bercinsky, David, New Haven.
Coops, F. H., Bridgeport.
Page, C. I., Litchfield.

CUBA.

Barney, F. M., Fisherman's Point.

DELAWARE.

Crawford, G. G., Wilmington.
Gray, O. J., Wilmington.
Harmonson, C. G., Clayton.
Jones, G. Frank, Georgetown.
Palmer, D. D., Bridgeville.
Riley, T. G., Harrington.
Virdin, Frank, Kenton.

DISTRICT COLUMBIA.

Baker, Frank, Washington.
Donnally, H. H., Washington.
Hamilton, R. A., Washington.
Jones, Louise T., Washington
Schneider, F. A., Washington.

GEORGIA.

Aycock, W. H., Molena.
Campbell, W. H., Chipley.
Evans, W. W., Millen.
Grubbs, L. F., Sylvester.
Head, M. M., Zebulon.
Miller, W. A., Marietta.
Redding, D. C. D., Warthen.

IDAHO.

Robinson, J. W., McCammon.

ILLINOIS.

Asbury, I. M., McLeansboro.
Bak, E. W., Chicago.
Barr, C. H., Dwight.
Behrendt, Alexander, Chicago.
Blech, G. M., Chicago.
Brown, M. R., Chicago.
Butterfield, E. H., Ottawa.
Carroll, C. L., Taylorville.
Dewey, Grace, Jacksonville.
Harlan, J. D., Fairfield.
Holmboe, A., Chicago.
Hutchinson, Robt., Capron.
Koehler, Gottfried, Chicago.
Lindley, A. M., Urbana.
Lyon, C. M., McLeansboro.
McCall, T. E., Vienna.
McDowell, W. D., Chicago.
McGrath, W. W., Savanna.
Miller, R. C., Shannon.
Moore, W. H., Dixon.
Morton, D. F., Taylorville.
Parker, C. A., Chicago.
Shapiro, H. B., Chicago.
Struzynski, L. M., Joliet.
Taylor, J. L., Springfield.
Thompson, H. L., Harrisburg.
Threadgill, J. M., New Douglas.
Wagner, T. H., Joliet.
Wedge, D. C., Ipava.
Woodside, E. E., Johnston City.

INDIANA.

Barnes, G. O., Seymour.
Bond, M. L., Aurora.
Broughton, F. K., Wolcottville.
Cady, N. W., Logansport.
Conger, C. W., Indianapolis.
Cronk, C. F., Wolcott.
Eshleman, L. H., Marion.
Fleming, H. G., New Point.
Grubb, A. G., Mongo.
Holmes, E. S., Aurora.
Johnson, J. E., Marion.
Kamman, G. H., Seymour.
Kelly, L. H., Hammond.
Kirkpatrick, A. M., Columbus.
Malone, B. Elizabeth, La Porte.
Martin, P. F., Indianapolis.
Nierman, H. G., Ft. Wayne.
Pate, J. R., Milan.
Pearson, J. R., Bedford.
Root, W. W., Parker.
Sensenich, R. L., Wakarusa.
Shrum, Riley, Bedford.
Smith, L. F. J., Wabash.
Spencer, M. J., Indianapolis.
Spurgeon, W. A., Muncie.
Tepe, G. W., Evansville.
Thorner, Moses, Indianapolis.
Venzey, W. M., Avilla.
Yager, E. J., Otterbein.

INDIAN TERRITORY.

Puckett, Carl, Pryor Creek.

IOWA.

Bailey, J. W., Nevada.
Baldwin, L. A., Elliott.
Bickley, C. G., Waterloo.
Bowen, F. S., Woodburn.
Craig, J. W., Lohrville.
Crawford, J. L., Cedar Rapids.
Fenton, W. J., Mystic.
Frantz, C. P., Burlington.
Gilmore, J. E., Monticello.
Hobson, A. J., Hampton.
Johnson, A. P., Sigourney.
Kessell, J. E., Riverton.
Mahood, W. R., Sioux City.
Martin, J. W., Colfax.
Messenger, W. E., Prescott.
O'Donoghue, J. H., Storm Lake.
Plonske, C. J., Bancroft.
Sparks, F. R., Clarinda.
Tait, T. Eliot, Creston.
Tinley, Mary L., Council Bluffs.
Uran, J. A., Holland.
Wilson, H. P., Mediapolis.

KANSAS.

Bowen, W. F., Topeka.
Brown, T. O., Reading.
Campbell, W. B., Troy.
Carver, H. F., Circleville.
Cave, T. R., Manhattan.
Davidson, C. L., Waverly.
Davis, A. C., Hamlin.
Egan, Belinda E., Waverly.
Emerson, F. G., Wellington.
Farr, W. A., Miltonvale.
Hall, James, Miltonvale.
Hindman, J. H., Humboldt.
Iles, U. G., Seneca.
Lewis, A. B., Hamilton.
Liggett, E. E., Oswego.
Moffitt, C. J., Manhattan.
Nelson, C. R., Washington.
Powers, J. H., Little River.
Simmons, J. W., Culver.
Tourigny, Edward, Aurora.
Van Voorhis, V. C., Robinson.

KENTUCKY.

Chase, H. S., Junction City.
Davis, M. S., Lexington.
Bell, J. E., Casky.
Moore, P. A., Clinton.
Pusey, H. M., Louisville.
Rominger, Louis, Louisville.
Shafer, J. J., Louisville.
Sheppard, W. E., Taylorsville.
Stewart, H. B., Spring Grove.
Stone, J. E., Herndon.
Wesley, J. T., Middleburg.

LOUISIANA.

Moore, P. A., New Orleans.

MAINE.

Cragin, C. L., Portland.
Hitchcock, H. E., Portland.
Small, F. E., Biddeford.
Tibbetts, R. R., Bethel.
Willis, J. L. M., Eliot.
Withan, A. N., Westbrook.

MARYLAND.

Abercrombie, R. T., Baltimore.
Cobey, J. C., Frostburg.
Hayward, E. H., Baltimore.
Lacy, J. W., Lisbon.
Mattfeldt, C. L., Catonsville.
Morris, L. W., Salisbury.
Riley, J. L., Snow Hill.

MASSACHUSETTS.

Bartlett, C. S., Gardner.
Bartley, J. J., Lawrence.
Cusick, L. F., Boston.
Hess, P. W., Winthrop.
Hubbard, G. W., South Hadley.
Noyes, W. N., Salem.
Palmer, G. M., Boston.
Stone, M. C., Fitchburg.
Sturnick, Max, Roxbury.

MICHIGAN.

Baert, G. H., Grand Rapids.
Breitenbach, O. C., Escanaba.
Carriel, H. T., Marquette.
Dodds, J. C., Detroit.
Dougher, E. J., Midland.
Dryden, M. V., Battle Creek.
Foust, E. H., Marshall.
Handy, J. W., Flint.
Hagadorn, J. W., Lansing.
Hanna, S. C., Detroit.
MacIntyre, D. R., Ishpeming.
Montford, Willard, Ithaca.
Parker, J. O., Owosso.
Roach, J. J., Bennington.
Robertson, C. G., Sandusky.
Sarber, H. O., Rockford.
Seeley, A. L., Mayville.
Vandeventer, V. H., Ishpeming.
Wilcox, Getrude L., St. Louis.
Yale, A. E. W., Bay Port.

MINNESOTA.

Holst, C. F., Little Falst.
Musgrave, Sam'l, Jr., Minneapolis.
Nessa, N. J., Brewster.
Rains, J. M., Willmar.

MISSISSIPPI.

Boatner, F. P., Myrtle.
Montgomery, W. R., Cornersville.
Steger, J. O., Columbus.

MISSOURI.

Adams, Noah, Kansas City.
Althans, Carl, St. Louis.
Amerman, I. W., Nevada.
Arnett, A., Novelty.
Bishop, W. T., Hughesville.
Brandenburger, L. A., St. Louis.
Brown, L. S., Edina.
Chaffin, W. F., Raymore.
Clark, H. M., Platte City.
Cordry, H. V., Boonville.
Connolly, P. D., St. Louis.
Dixon, J. C. B., West Plains.
Ehrhardt, R. T., St. Louis.
Foster, T. W., Butler.
Gish, G. J. P., Minden Mines.
Gish, J. S., Liberal.
Gossow, A. A., St. Charles.
Graham, I. E., St. Louis.
Grim, E. A., Kirksville.
Grim, E. C., Kirksville.
Guhman, M. G., St. Louis.
Hallam, J. C., St. Louis.

Hardy, W. F., St. Louis.
Hartmann, J. A., St. Louis.
Hays, R. W., Jackson.
Hempelmann, L. H., St. Louis.
Hoefer, J. P., St. Louis.
Hoffmann, Phil., St. Louis.
Howard, A. P., St. Louis.
King, W. E., Kansas City.
Klein, S., St. Louis.
Klokke, W. E., St. Louis.
Lancaster, H. W., Rich Hill.
Lewis, Chas., St. Louis.
Mankopf, B. E., New Haven.
Martin, J. Ross, Merwin.
Mattox, W. P., Sullivan.
McLemore, Tipton, Nevada.
Montgomery, J. S., Milan.
Modl, J. R., St. Charles.
Nichols, D. J., West Plains.
Parker, C. W., St. Louis.
Pipkin, W. D., Excello.
Pitman, John, Kirkwood.
Poignie, F. P., St. Louis.
Pollard, H. M., Shelbina.
Rohling, L. C., St. Louis.
Shoemaker, W. A., St. Louis.
Songer, H. E., Jamesport.
Steckman, P. M., Plattsburg.
Streuker, C. E. F., St. Louis.
Terrill, S. J., Meta.
Welch, W. A., Callao.

MONTANA.

Benning, L. C., Miles City.
McCall, S. H., Missoula.

NEBRASKA.

Eigler, C. O., North Bend.
Marnell, F. S., Nebraska City.
Weir, E. A., Hastings.

NEVADA.

Cope, P. F., Goldfield.
Jones, McMillan, Carlin.
Scrivoss, G. L., Fairview.

NEW HAMPSHIRE.

Morrill, S. G., Concord.

NEW JERSEY.

Alexander, W. G., Orange.
Carman, F. F., Montclair.
Mills, A. M., Newark.
Vaughan, H., Morristown.
Sprague, E. W., Newark.

NEW YORK.

Allen, D. B., Saugerties.
Azzarl, E. W., New York.
Bailey, F. C., Adams Center.
Baldwin, Evelyn, Rochester.
Barnes, J. A., Troy.
Basch, Seymour, New York.
Beckary, A. M., New York.
Beilby, G. E., Albany.
Beers, M. I., Middletown.
Berg, H. W., New York City.
Best, C. S., Middleburg.
Borst, Nelson, Poughkeepsie.
Bourne, C. W., Hamburg.
Bradley, C. C., New York City.
Braman, J. H., Albany.
Brown, C. R., Almond.
Breckwedel, H. B., New York.
Brill, N. E., New York.
Brooks, P. B., Norwich.
Brown, F. T., New York.
Cannon, G., Watertown.
Chase, B. F., East Syracuse.
Clark, J. Bayard, New York.
Conant, J. B., Amsterdam.
Culbert, W. L., New York.
Cunningham, T. H., Glens Falls.
Davies, R. C., Granville.
Dawes, S. L., Albany.
Deely, G. E., Brooklyn.
De Wattoff, D. Boris, New York.
Dolley, S. R. A., Rochester.
Dowd, J. Henry, Buffalo.
Dudley, R. B., Clinton.
Eddy, E. E., Redwood.
Eddy, J. W., Oswego.
Fairbairn, H. A., Brooklyn.
Falkenburg, A. E., Whitehall.
Farrar, J. N., New York.
Fedde, B. A., Brooklyn.
Finerty, J. J., Buffalo.
Forbes, George, Astoria, L. I.
Forsyth, E. A., Buffalo.
Fuller, E. D., Utica.
Gilmore, R., Schenectady.
Gilson, C. L., New York.
Gilbert, Archibald, Amsterdam.
Goodfellow, E. H., Gloversville.
Gordon, O. A., Brooklyn.
Gribbon, H. A., Poughkeepsie.
Guillemont, Frank, Niagara Falls.
Guyer, F. N., Albany.
Hallock, S. F., New York.
Harris, J. T., Tonawanda.
Haupt, Louis, New York.
Hayden, J. R., New York.
Heitzmann, Louis, New York.
Hermance, E. M., Yonkers.
Hoffman, C. R., Glens Falls.
Hollinger, Wm., Newburgh.
Hun, Henry, Albany.
Ilston, B. F., Jamestown.
Jackson, J. H., Dansville.
Jameson, C. N., Rochester.
Jameson, Thomas, Rochester.
Jewett, Charles, Brooklyn.
Jones, O. E., Rochester.
Kasper, Gerard, Brooklyn.
Kidd, P. E., Brooklyn.
Kinghorn, H., McL., Saranac Lake.
Kirkpatrick, R. A., Troy.
Klein, H. O., New York.
Lewis, F. A., Auburn.
Loewe, Jacques, Brooklyn.
Ludlum, W. D., Brooklyn.
MacDonald, C. F., New York.
Mason, F. C., Massena.
McBrien, F. R., Niagara Falls.
McCastline, W. H., New York.
McCullagh, S., New York.
McDowell, N. D., Rochester.
McGarrahan, J. F., Cohoes.
McNamara, S. J., Brooklyn.
Mehl, W. M., Buffalo.
Menzie, R. J., Caledonia.
Meyers, George, New York.
Middleton, John, Buffalo.
Morris, E. J., Brooklyn.
Morrison, D. A., Buffalo.
Morse, H. A., Batavia.
Mott, Valentine, Woodbury.
Middleton, J. I., New York.
Miller, J. H., Niagara Falls.
Murphy, D. A., Gloversville.
Myers, T. H., New York.
Neal, G. A., Alabama.
Nellis, W. J., Albany.
Niesley, C. M., Manhasset.
Page, S. E., Ithaca.
Palmer, M. B., Rochester.
Pashley, Samuel, Hartford.
Phelps, R. H., Norwich.
Randel, W. A., New York.
Reese, R. G., New York.
Reichers, G. H., Brooklyn.
Reilly, E. A., Elmira.
Reinhardt, H. M., Buffalo.
Reitz, Charles, Rochester.
Robinson, J. A., Elmira.
Rochester, Haydon, Rochester.
Rood, M. G., Syracuse.
Ross, C. M., New Brighton.
Scrimgeour, Robert, Brooklyn.
Shelley, H. J., Middletown.
Siegel, Ferdinad, Brooklyn.
Skinner, C. R., Copake.
Skinner, W. W., Geneva.
Smith, G. F., Falconer.
Stadlinger, H. E., Buffalo.
Strong, A. E., Mt. Vernon.
Thomson, A. N., Brooklyn.
Torney, G. H., Jr., Utica.
Trick, H. R., Buffalo.
Tuthill, R. K., Poughkeepsie.
Van Hoesen, Louis, Hudson.
Van Wagner, L. C., New Berlin.
Vedder, J. D., Johnstown.
Walton, J. S., Amsterdam.
Ward, S. B., Albany.
Warner, H. M., Hempstead.
Warren, N. A., Yonkers.
Waterman, J. S., Brooklyn.
Wilcox, R. A., Phoenix.

NORTH CAROLINA.

Allen, R. L., Waynesville.
Ashmore, W. F., Anderson.
Baird, J. H., Mars Hill.
Bass, H. H., Henderson.
Bradsher, W. A., Roxboro.
Sage, J. W., Burlington.
Weaver, W. J., Marshall.
Whittington, W. W., Snow Hill.

NORTH DAKOTA.

Arneberg, J. G., Leeds.
Young, V. A., Hankinson.

OHIO.

Baldwin, Henry, Jr., Springfield.
Bedinger, D. W., Bellbrook.
Blackburn, M. E., Columbus.
Blanchard, F. G., Woodville.
Breck, Theo., Breckville.
Brown, G. N., Hebron.
Burns, F. M., Cincinnati.
Carr, A. H., Reading.
Chidester, C. W., Delaware.
Fennel, O. W., Cincinnati.
Follett, A. K., Granville.
Fraunfelter, C. E., Canton.
French, G. R., Garrettsville.
Gamble, R. V., New London.
Gates, E. S., Cincinnati.
Gray, Dan, Ironton.
Hardwick, R., Cincinnati.
Hocker, Elizabeth, Cincinnati.
Hull, J. W., Toledo.
Larimore, F. B., Port Washington.
Lindsay, F. T., Xenia.
Lummis, G. D., Middletown.
McBride, Julia L., Mansfield.
McGavran, S. B., Cadiz.
McLaughlin, C. C., Dunkirk.
Montgomery, C. W., Sycamore.
Moodie, E. L., Chatham.
Nichols, G. R., Wapakoneta.
Parant, W. H., Lima.
Philo, D. W., Woodville.
Pickett, F. S., Cleveland.
Primrose, I. P. Nelsonville.
Pucklitsch, E. O., Cincinnati.
Robinson, P. B., Put-in-Bay.
Rutter, H. C., Columbus.
Sealover, W. F., Zanesville.
Semans, W. M., Delaware.
Souther, C. T., Cincinnati.
Stall, A. H., Barberton.
Taylor, W. C., Springfield.
Topie, A. C., St. Bernard.
Wheelock, L. A., Cleveland.
Weller, V. B., Ostrander.
White, U. P., Athens.
Williams, D. R., Columbus.
Zeller, C. W., Defiance.
Zinsmaster, L. B., Massillon.

OKLAHOMA.

Edwards, R. T., Oklahoma City.
Myers, D. A., Lawton.

OREGON.

Nichols, H. S., Portland.

PENNSYLVANIA.

Arnold, J. F., Williamsburg.
Becker, H. M., Sunbury.
Billings, F. F., Pittsburg.
Brady, S. H., Lost Creek.
Brown, P. A., New Kensington.
Burg, S. S., Northumberland.
Burgwin, C. W., Parkers Landing.
Campbell, C. F., Sunbury.
Clark, B. F. R., Narberth.
Clark, W. B., Butler.
Cressinger, J. B., Sunbury.
Dechert, H. W., Orwigsburg.
Deichler, L. W., Philadelphia.
Dennis, A. L., Conneautville.
Dickensheid, E. H., Allentown.
Dickson, J. R., Gettysburg.
Easton, J. S., Pittsburg.
Gilligan, J. P., Wilkesbarre.
Gordon, J. W., Clearfield.
Griffith, D. H., Pittsburg.
Groff, G. G., Lewisburg.
Grove, L. V., West Sunbury.
Hammers, J. S., Indiana.
Hill, R. L., Glenfield.
Holmes, E. Burvill, Philadelphia.
Hunt, J. S., Easton.
Jenks, H. H., Philadelphia.
Johnson, H. D., Cheltenham.
Kennedy, L. T., Pottsville.
Klopp, E. L., Philadelphia.
Knorr, L. R., Pittsburg.
Kobler, H. B., Philadelphia.
Lindley, C. M., Washington.
Loughridge, S. S., Philadelphia.
Mackinney, W. H., Philadelphia.
Marsh, W. G., Watsontown.
McCorkle, W. P., Sheridanville.
McMaster, G. C., Beechview.
Miller, M. B., Philadelphia.
Nason, F. T., McKeesport.
Norris, J. F., Johnstown.
Petty, O. H., Philadelphia.
Piper, E. N., New Kensington.
Ressler, G. W., Ashland.
Saunders, R. R., Philadelphia.
Schildecker, C. B., Pittsburg.
Seidel, C. T. W., Transfer.
Sherrer, H. S., Bangor.
Smith, P. F., Uniontown.
Sprowls, W. W., Houston.
Stanton, C. C., Sharpsburg.
Steck, C. T., Berwick.
Terry, G. H. B., Wyalusing.
Thomas, E. W., Philadelphia.
Walton, L. S., Pittsburg.
Willetts, E. W., Pittsburg.
Womer, W. A., New Castle.

SOUTH CAROLINA.

Bates, L. B., St. Mathews.
Briggs, D. K., Blackville.
Carpenter, E. W., Greenville.
Dreher, T. H., St. Mathews.
Ellison, P. G., Newberry.
Hall, H. T., Aiken.
Jeffords, T. A., Orangeburg.
La Borde, Oscar, Columbia.
McCreary, J. A., Williston.
Moore, R. L., Columbia.
Morrall, S. A., Trenton.
Nesbitt, J. N., Gaffney.
Oliver, J. M., Orangeburg.
Pou, W. L., St. Mathews.
Rice, H. W., Columbia.
Simons, E. W., Summerville.
Sosnowski, J. C., Charleston.
Taylor, J. H., Columbia.
Thompson, J. L., Columbia.
Townsend, J. B., Anderson.
Walter, G. H., Orangeburg.
Wheeler, J. S., Prosperity.
Wyche, C. T., Prosperity.

SOUTH DAKOTA.

Billion, T. J., Sioux Falls.
Clough, A. E., Madison.
Herman, J. D., Conde.
Langly, C. S., Lake Andes.
Schwendener, J. E., Bryant.

TENNESSEE.

Daniel, W. H., McEwen.
Guerin, H. C., Dickson.
Hawkins, W. H., Greeneville.
High, B. J., Stonewall.
Nash, W. S., Knoxville.
Williamson, G. L., Jackson.

TEXAS.

Allen, J. I., Cass.
Bedford, J. D., Honey Grove.
Blassingame, A. A., Denison.
Campbell, N. W., Willspoint.
Carson, J. W., Comanche.
Cochran, E. G., Greenville.
Collier, E. S., Willspoint.
Decker, C. M., San Antonio.
Easterling, A. H., Athens.
Elliott, O. C., Waco.
Ellis, I. D., Troy.
Gullette, J. F., Pilugerville.
Hendrick, J. P., Huntsville.
Kinney, Terry, San Marcos.
La Rue, R. L., Athens.
MacGregor, W. W., Laredo.
McClure, R. Q., Gilmer.
McPherson, D. B., Longview.
Moseley, E. M., Rusk.
Perkins, W. F., Tolar.
Reifel, J. W., Houston.
Savage, H. B., Honey Grove.
Van Ness, J. M., Prairie Lee.
White, F. S., Terrill.
Zielinski, A. J., Schulenburg.

UTAH.

Tyndale, W. R., Salt Lake City.

VERMONT.

Bean, J. H., Jeffersonville.
Cobb, G. N., White River Jct.

VIRGINIA.

Angle, S. B., Olney.
Claud, E. H., Portsmouth.
De Cormis, J. L., Acomac C. H.
Downey, F. C., Edinburg.
Everett, J. C., Nelly's Ford.
Fox, A. C., Waynesboro.
Glover, Perkins, Arvonia.
Martin, Roger, Raphine.
Nichols, R. A., Richmond.
Piper, W. L., Richmond.
Randolph, R. C., Boyce.
Rucker, M. P., Manchester.
Skinner, C. L., Rectortown.
Smallwood, J. P., West End.
Tompkins, G. J., Lynchburg.

WASHINGTON.

Cowan, C. B., Seattle.
Fell, G. E., North Yakima.
Fifield, Ella J., Tacoma.
Hixon, E. F., Vancouver.
West, E. S., North Yakima.
Zener, C. R., La Center.

WEST VIRGINIA.

Amick, W. D., Glenalum.
Guthrie, J. A., Huntington.
Heslep, W. A., St. Albans.
Ladwig, Worthington, Lost Creek.
McCauley, W. H., Sutton.
Oesterling, H. E., Wheeling.
Tooley, G. W., Huntington.
Wheeler, B. B., McKendree.
Whitescarver, J. S., Grafton.
Williams, J. P., War Eagle.

WISCONSIN.

Beyer, A. G., Milwaukee.
Edsall, F. H., Madison.
Evans, E. P., South Milwaukee.
Habhegger, C. J., Watertown.
Heising, A. F., Menominie.
Holmberg, Le Roy J., Cashton.
Knauf, G. E., Sheboygan.
Nicholson, W. G., Green Bay.
Niles, W. L., New York.
Nixon, R. T. A., Brookfield.
Oberton, C. A., Union Grove.
Yanke, A. E., Milwaukee.
Zierath, W. F., Sheboygan.

WYOMING.

Snyder, O. K., Cheyenne.

Marriages

F. M. BELL, M.D., to Miss Laura Miles, both of Grant, Neb., November 7.

HARRY K. GORSUCH, M.D., to Mrs. Alline Mosby, at Baltimore, October 20.

A. J. RUDOLF, M.D., to Miss Jennie Perrizo, both of Delavan, Minn., October 24.

J. HENRY ORFF, M.D., to Miss Viola M. Darrah, both of Reading, Pa., October 18.

LEONARD A. RICHARDSON, M.D., to Miss Nora R. Hand, both of Baltimore, October 24.

WILLIAM C. HEINTZ, M.D., to Miss Laura L. Buchsieb, both of Columbus, Ohio, October 25.

BRUCE D. HART, M.D., Churubusco, Ind., to Miss Nina Merrill, of Prophetstown, Ill., October 18.

FRANK A. MILLER, M.D., Gowen, I. T., to Miss Maudean Lewis, at Mena, Ark., October 17.

W. C. VAN NUYS, M.D., New Castle, Ind., to Miss Margaret Sword, at Reading, Kan., October 24.

W. JAMES HOWELLS, M.D., to Miss Mary Gertrude Bannon, both of Spokane, Wash., October 24.

JAMES M. SELISKAR, M.D., Cleveland, Ohio, to Miss Frederica Cline of Medina, Ohio, October 24.

ALFRED WOODHOUSE, M.D., Trenton, N. J., to Miss Helen L. Prince of Elizabeth, N. J., October 27.

CARLETON G. CRISLER, M.D., Cincinnati, to Miss Elizabeth Cropper of Bullittsville, Ky., October 26.

JOHN D. HUNTER, M.D., Kansas City, Mo., to Miss Rena Richards of Fort Scott, Kan., October 24.

DAVID DALE, M.D., Bellefonte, Pa., to Miss Anna Dunlop McPherson of Gettysburg, Pa., October 24.

WILLIAM H. WEIR, M.D., Cleveland, Ohio, to Miss Roslyn Campbell of Yorkshire, England, October 6.

BROOKE M. ANSPACH, M.D., Philadelphia, to Miss Martha McCormick of Williamsport, Pa., November 1.

ARTHUR GORDON DOTY, M.D., to Miss Ruth Margaret Mac Ritchie, both of Hillsdale, Mich., October 25.

LEO J. CRUM, M.D., Kalamazoo, Mich., to Miss Minnie Shorr of Cleveland, Ohio, at Kalamazoo, October 24.

WILLIAM BOYD HIGHT, M.D., Queen City, Mo., to Miss Winnetka Murphey of Des Moines, Iowa, October 16.

JOHN THOMAS O'MARA, M.D., Baltimore, to Miss Josephine Euphrasia Larkin, at Pelham, N. Y., October 10.

FOSTER WAN BURKE, M.D., Laclede, Mo., to Miss Georgia Eunice Maxey of Kansas City, Mo., October 20.

JOHN A. CECONI, M.D., to Miss Louise E. Roster, both of Boston, at Dorchester Lower Mills, Mass., October 25.

MICHAEL FRANK BARRETT, M.D., Brockton, Mass., to Miss Louise Grant of Boston, at Hingham, Mass., October 24.

MAURICE E. STAYER, M.D., Woodbury, Pa., to Miss Maude Gardner of Rockwod, Pa., at Cumberland, Md., October 24.

JOHN JOSEPH LIGHT, M.D., Lebanon, Pa., to Miss Sara Ada Bomberger of South Lebanon Township, at Reading, Pa., October 29.

Deaths

John C. Shrader, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1865; Long Island College Hospital, Brooklyn, N. Y., 1870; one of the organizers of the State University of Iowa, College of Medicine, Iowa City; formerly dean and emeritus professor of obstetrics, gynecology, clinical gynecology and diseases of children in that institution; formerly vice-president and member of the executive committee of the American Public Health Association; formerly president of the Iowa State Board of Health and State Board of Medical Examiners; a member of the Iowa State Association of Railway Surgeons; a member and once president of the Iowa State Medical Society; a member of the American Association for the Advancement of Science, Cedar Valley, Eastern Iowa and Capital District Medical Society, British Medical Association, Western Association of Obstetricians and Gynecologists, and Association of State and Provincial Boards of Health; for two terms state senator; major and surgeon of the Twenty-second Iowa Volunteer Infantry throughout the Civil War; commissioner of insanity for Johnson County, died at his home in Iowa City, after a long illness, October 30, aged 76.

Isaac C. Walker, M.D. Cincinnati College of Medicine and Surgery, 1858; professor of diseases of the mind and nervous system in the Medical College of Indiana, Indianapolis, for 35 years; emeritus professor for three years, and in 1880 dean of the college; some-time president of the Indianapolis Medical Society; president of the Marion County Medical Society; a member of the Tri-State Medical Society, Indiana State Medical Society; a member of the Indianapolis city council for two years and its president for one year; an active and successful practitioner and forceful teacher, died at his home in Indianapolis, October 28, aged 79.

Octavius A. Crenshaw, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1844; medical director of the Army of Western Virginia during the Civil War, and head physician of the White Sulphur Springs Hospital and Chimborazo Park Hospital, Richmond; one of the oldest and most distinguished practitioners of Richmond, Va., died at his home in that city, October 22, after an illness of only one week, aged 84. The medical profession of the city met with the Richmond Academy of Medicine and Surgery, October 23, to take suitable action regarding the death of Dr. Crenshaw.

Henry Ashley Root, M.D. Cleveland Medical College, Medical Department of Western Reserve Medical College, 1866; a member of the American Medical Association, Ohio State Medical Society, Lucas County Medical Society, and for many years president of the Toledo Medical Society; for 21 years a member of the pension board, and for 25 years chief of the medical staff of St. Vincent's Hospital, Toledo, died at his home in that city, October 24, after an illness of more than a year, aged 64.

Joseph W. Cooper, M.D. Jefferson Medical College, Philadelphia, 1884; a member of the American Medical Association and Eastern Ohio Medical Association; for many years medical examiner for the Pennsylvania Company and the Carnegie Steel Company, at Bellaire, Ohio, and one of the most prominent physicians of that city, died October 28, at the Wheeling (W. Va.) Hospital, from tuberculosis.

James L. Johnston, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1863; a member of the hospital corps of the Army during the Civil War; president of the local pension examining board from 1884 to 1898; a member of the Eaton and Berry County Medical Society, died at his home in Chester, Mich., September 14, from cerebral hemorrhage, after an invalidism of 14 years, aged 70.

Frederick R. Hudson, M.D. Homeopathic Hospital College, Cleveland, 1882; formerly assistant surgeon, Second Infantry, N. G., N. Y.; a member of the Association of Military Surgeons of the United States; of Hoosick Falls, N. Y., died at the Hudson River State Hospital for the Insane, Poughkeepsie, after an illness of three years, October 25, aged 50.

Thomas Stevenson, M.D. Bellevue Hospital Medical College, New York City, 1888; a member of the New York County Medical Society; surgeon to the nose and throat department of the Bloomingdale Clinic, died suddenly at the home of his brother, in New York City, from pneumonia, October 27, aged 41.

Frederick W. Fanning, M.D. University of Michigan College of Medicine and Surgery, Ann Arbor, 1867; for a number of years local surgeon of the Wabash Railway Company at Butler, Ind., died at his home in that city, October 26, from paralysis, after an illness of several months, aged 65.

Vernon D. Rood, M.D. University of Vermont, Medical Department, Burlington, 1867; a member of the San Diego County Medical Society, and a veteran of the Civil War, died at his home in San Diego, Cal., October 26, from septicemia, supervening on diabetic gangrene, aged 68.

Benjamin H. Masterman, M.D. Medical College of Ohio, Cincinnati, 1880; health officer of Montgomery County, Kansas; a veteran of the Civil War; for 12 years a member of the district pension board, died at his home in Independence, Kan., October 25, aged 60.

Thomas J. Mullaney, M.D. Rush Medical College, Chicago, 1903; formerly interne in St. Joseph's Hospital, Chicago, died in the Presbyterian Hospital, Waterloo, Iowa, October 23, from septic endocarditis, after an illness of two months, aged 29.

John Barnett Matthews, St. John's Medical Society, 1865; of Zebulon, Ga.; for a number of years clerk of the Pike County Superior Court, died in Atlanta, May 4, two months after an operation for disease of the prostate gland, aged 66.

Scott **Mendenhall, M.D.** Atlanta College of Physicians and Surgeons, 1905; formerly of Jacksonville, Fla., died from the effects of an overdose of morphine, supposed to have been taken with suicidal intent, October 26, aged 25.

J. H. **Dewberry, M.D.** Jefferson Medical College, Philadelphia, 1857; a retired practitioner and prominent business man of Birmingham, Ala., died at his home in that city, October 26, after an illness of two weeks, aged 72.

Isaac W. **Clinger, M.D.** Physio-Medical College of Ohio, Cincinnati, 1877; a veteran of the Civil War, died at his home in Springfield, Ohio, from cerebral hemorrhage, October 25, after an illness of one week, aged 58.

Andrew C. **Lyngar, M.D.** Missouri Medical College, St. Louis, 1876; a veteran of the Civil War, and for 25 years a practitioner of Opolis, Kan., died at his home in Pittsburg, Kan., from heart disease, October 24, aged 61.

James B. **Shemwell, M.D.** Eclectic Medical Institute, Cincinnati, 1889, died at his home near Pitman's Ferry, Ark., October 23, from heart disease, following an attack of bilious fever, after an illnes of 10 days, aged 52.

J. L. **McCorkle, M.D.** University of Louisville, Medical Department, 1879; of Little Rock, Ark., died in the Pulaski County Hospital, Little Rock, October 26, after an illness of two weeks, aged 54.

William R. **McKinley, M.D.** Medical College of Georgia, Augusta, 1904; formerly assistant surgeon at Fort Stanton, N. M., died at the Augusta City Hospital, October 24, after an illness of several months, aged 26.

Addison W. **Ball, M.D.** Medical College of Indiana, Indianapolis, 1883; of Indianapolis, died at the Indianapolis City Hospital, October 22, from cerebral hemorrhage, after a long illness, aged 57.

James William **Howard, M.D.** Willamette University, Medical Department, Salem, Ore., 1876; of Missoula, Mont., died recently and was buried in the Missoula Valley cemetery, October 23.

Ruel Dwight **Rice, M.D.** Eclectic Medical Institute, Cincinnati, 1846; surgeon in the Army throughout the Civil War, died at his home in Alameda, Cal., October 22, aged 86.

Fleming G. **Tarver, M.D.** New York University, New York City, 1872, died at his home in Augusta, Ga., October 25, after a long period of invalidism.

Joseph W. **Simrock, M.D.** University of Bonn, Germany, 1863; a laryngologist of New York City, died in Grindelwald, Switzerland, recently.

Clinton **Colegrove, M.D.** University of Buffalo, Medical Department, 1850, died at his home in Holland, N. Y., October 19, aged 79.

Edward H. **Anderson, M.D.** Cleveland Homeopathic Medical College, 1894, died at his home in Cleveland, October 23, aged 52.

W. L. **Dean, M.D.** Atlanta (Ga.) Medical College, 1878; of Woodstock, Ga., died in Atlanta, October 23, after a long illness.

Deaths Abroad.

P. **Merklen, M.D.,** lecturer on diseases of the heart and hospital physician at Paris, died October 13, aged about 50. He was a frequent contributor to the French medical press, most of his works being on affections of the heart, kidneys and skin.

J. **Weinlechner, M.D.,** professor of surgery at Vienna until 1901, when he reached the age limit, died suddenly September 30, while hunting, aged 78.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending Nov. 3, 1906:

Palmer, Fred. W., asst.-surgeon, granted an extension of ten days to his leave of absence.

Lewis, William F., asst.-surgeon, ordered to Washington, D. C., for examination for promotion.

Davidson, Wilson T., asst.-surgeon, granted leave of absence for two months.

Duncan, William A., asst.-surgeon, left Fort Logan, Colo., on leave of absence for one month.

Talbott, Edward M., asst.-surgeon, left Fort Leavenworth, Kans., for duty in the field with 3d Squadron, 10th Cavalry, from Fort Robinson, Neb.

Hoff, John Van R., asst.-surgeon-general, left Headquarters, Department of the Missouri, Omaha, en route to Manila, P. I., for duty.

Miller, Reuben B., Ragan, Charles A., Eastman, Wm. R., Hall, James F., Metcalfe, R. F., Rich, Edwin W., Boyer, Perry L., Phalen, James M., asst.-surgeons, advanced from the grade of first lieutenant to that of captain from Oct. 30, 1906.

Edger, Benjamin J., Jr., asst.-surgeon, assigned to duty at Fort Reno, Oklahoma.

Cox, Walter, asst.-surgeon, relieved from duty at Fort Reno, Oklahoma, and ordered to Fort Sill, Oklahoma, for duty.

Hammond, Wm. G., dental surgeon, granted leave of absence for one month.

Jarrett, Arthur R., contract surgeon, ordered from Fort Totten, N. Y., to Fort Wood, N. Y., for temporary duty.

Kennedy, James S., contract surgeon, returned to Fort Omaha, Neb., from leave of absence.

Merrick, John N., contract surgeon, granted an extension of one month to his leave of absence.

Stuckey, Harrison W., contract surgeon, left Fort Snelling, Minn., on leave of absence for one month.

Pinquard, Joseph, contract surgeon, ordered to Fort Robinson, Neb., for temporary duty.

Hayes, Melville A., contract surgeon, ordered from Fort Casey, Wash., to Fort Stevens, Ore., for temporary duty.

Harmon, Daniel W., contract surgeon, ordered from Nashville, Tenn., to Fort Hancock, N. J., for duty.

Carpenter, Alden, dental surgeon, relieved from duty at Vancouver Barracks, Wash., and ordered to Havana, Cuba, for duty.

Rebert, Michael A., contract surgeon, returned from West Point, N. Y., to duty at Fort Totten, N. Y.

Gregory, Verdo B., contract surgeon, arrived at San Francisco, Cal., on leave of absence for three months.

Cutliffe, William O., contract surgeon, granted an extension of 14 days to his leave of absence.

Wall, Francis M., contract surgeon, granted leave of absence for two months.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending Nov. 3, 1906:

Byrnes, J. C., medical inspector, commissioned a medical inspector in the Navy from Oct. 7, 1906.

Fitts, H. B., surgeon, detached *Lawton* to *Buffalo*.

Leach, P., surgeon, detached *Indiana*; to home and wait orders.

Lumsden, G. P., surgeon, detached *Minneapolis*, when placed out of commission; to home and wait orders.

Moore, J. M., surgeon, detached *Newark* when placed out of commission; to *Indiana*.

Iden, J. H., P. A. surgeon, detached *Newark* when placed out of commission; to home and wait orders.

Curtis, L. W., surgeon, to *Connecticut*.

Odell, H. E., P. A. surgeon, detached *Wisconsin* when placed out of commission; to home and wait orders.

Strine, H. F., P. A. surgeon, detached Naval Hospital, N. Y.; to duty at Naval Hospital, Newport, R. I.

Zalesky, W. J., asst.-surgeon, detached *Newport* when placed out of commission; to duty at the Naval Hospital, Portsmouth, N. H.

Mears, J. B., asst.-surgeon, detached *Minneapolis* when placed out of commission; to home and wait orders.

Farwell, W. G., asst.-surgeon, orders to *Connecticut* revoked.

Parker, E. G., surgeon, to Naval Hospital, New York.

Grove, W. B., surgeon, detached duty at the Naval Hospital, Boston; granted leave of absence for twenty days; thence to *Iowa*.

Bogan, F. M., P. A. surgeon, discharged treatment at Naval Hospital, Washington, and granted leave of absence for three months.

Payne, J. H., Jr., P. A. surgeon, to duty with Marine Recruiting Party, Atlanta, Ga.

Ely, C. F., asst.-surgeon, to duty at the Navy Recruiting Station, Buffalo, N. Y.

Hart, G. G., acting asst.-surgeon, detached duty at the Navy Recruiting Station, Buffalo; to duty at the Navy Recruiting Station, Providence.

Bucher, W. H., surgeon, detached from duty at the Navy Recruiting Station, Providence, and to duty at the Naval Hospital, Boston.

Dessez, Paul, asst.-surgeon, to duty at the Marine Barracks, Washington, D. C.

Field, J. G., surgeon, detached from temporary additional duty at the Marine Barracks, Washington.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Nov. 2, 1906:

SMALLPOX—UNITED STATES.

California: San Francisco, Oct. 13-20, 1 case.
Illinois: Galesburg, Oct. 13-27, 15 cases.
Missouri: St. Joseph, Oct. 6-13, 2 cases.
New York: New York, Oct. 13-20, 2 cases.
Texas: Houston, Oct. 13-20, 1 case.
Wisconsin: Appleton, Oct. 13-27, 2 cases.

SMALLPOX—FOREIGN.

Brazil: Bahia, Sept. 15-22, 1 case; Pernambuco, Sept. 1-30, 11 deaths; Rio de Janeiro, Sept. 16-30, 5 cases.
Chile: Antofagasta, Aug. 29-Sept. 12, 18 cases, 2 deaths; Coquimbo, Aug. 24, present.
Columbia: Cartagena, Sept. 8-29, 5 cases.
France: Paris, Oct. 6-13, 3 cases.
India: Calcutta, Sept. 8-15, 3 deaths; Madras, Sept. 8-14, 1 death; Sept. 22-28, 1 death.
Russia: St. Petersburg, Sept. 15-29, 5 cases, 1 death.
Spain: Barcelona, Oct. 1-10, 8 cases; Cadiz, Sept. 1-30, 7 cases.

YELLOW FEVER.

Brazil: Rio de Janeiro, Sept. 23-30, 1 case, 1 death.
Costa Rica: Limon, Oct. 12, 1 case (imported from Cartagena on S. S. *Prince Waldemar*.)
Cuba: Cruces, vicinity of, Oct. 24, 1 death; Havana, Oct. 26-30, 5 cases.
Mexico: Merida: Oct. 7-13, 2 cases.

CHOLERA—INSULAR.

Philippine Islands: Manila, Sept. 2-9, 27 cases, 24 deaths; Provinces, Sept. 2-9, 189 cases, 146 deaths.

CHOLERA—FOREIGN.

China: Shanghai, Sept. 15-22, 1 case.
India: Calcutta, Sept. 8-15, 15 deaths; Madras, Sept. 8-14, 131 deaths.

PLAGUE.

Brazil: Pernambuco, Sept. 1-30, 14 deaths; Rio de Janeiro, Sept. 16-30, 19 cases, 5 deaths; Sao Paulo, Sept. 16-23, 1 death.
Egypt: Alexandria, Sept. 29-Oct. 11, 8 cases, 4 deaths; Suez, 13 cases, 10 deaths.
India: Calcutta, Sept. 8-15, 8 deaths.
Turkey: Adalia, Sept. 20-23, 3 cases.
Peru: Lembayeque, Sept. 11, 1 death; Lima, Sept. 5, 1 case; Trujillo, Sept. 5, 3 cases.

Society Proceedings

COMING MEETINGS.

Southern Surg. and Gyn. Assn., Baltimore, Dec. 11-13.
American Public Health Assn., Mexico City, Dec. 3-7.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Regular Meeting, held October 22, 1906.

DR. FLOYD M. CRANDALL in the Chair.

A National Anti-Quackery Society.

CHAMPE S. ANDREWS, Esq., counsel of the society, after reviewing the work done during the past year and the great assistance that had been rendered the legal department by the United States Postoffice Department, through Postoffice Inspector William H. Snow, and by the police department of New York through Police Commissioner Col. Theodore A. Bingham, took up a consideration of the proposed national society for the preservation of the public health and morals. For a number of years the legal department has called attention to the fact that its work was reaching only a small part of the field it should cover in the interests of public health. Among the suggestions offered was one that included the formation of a new society, to have its branches in every state in the Union and in every city of any size in the country, these local branches to carry on the work against quackery, charlatanism and kindred subjects.

In a lecture delivered in Philadelphia last March, Mr. Andrews took occasion to elaborate on the necessity of forming a national society composed not only of physicians but of men and women in every walk of life interested in the suppression of quacks and quackery. This has been worked out, and has been approved by the Young Men's Christian Association of New York City; the New York Academy of Medicine; American Medical Association; Cardinal Gibbons of Baltimore; National Women's Christian Temperance Union; education department of the state of New York; Philadelphia County Medical Society; Medical Jurisprudence Society of Philadelphia; Medicolegal Society of Philadelphna; Association of Neighborhood Workers in New York City; American Public-Health Association; Dickens Fellowship, New York branch; American Society of Sanitary and Moral Prophylaxis; Emanuel Sisterhood of Personal Service; National Association for the Study and Prevention of Tuberculosis; the state's attorney of Baltimore; the Salvation Army; the Epworth League of the Methodist Episcopal Church; Luther Burbank; Julius M. Mayer, attorney general of the state of New York, and W. M. L. Coplin, director of public health of Philadelphia. The letters from these sources endorsing the movement were then printed in one pamphlet, together with the proposed form of resolution authorizing the appointment of delegates to the conference to be held November 15, Hudson Theater, New York City. Since that time over 100 societies have joined in the movement, and delegates are now being appointed from every section of the United States from every sort of public service society. Mr. Andrews said that it seemed safe to say that if the national society about to be formed availed itself of the materials lying on every side, waiting to be used against quacks and quackery, impure foods, adulteration of drugs, and similar evils, then its success will be phenomenal and terror would seize the camps of these miserable charlatans who for so many years have preyed unmolested on the ignorance and credulity of the people of this country.

Acute Pancreatitis: Report of Five Cases.

DR. JOHN F. ERDMANN reported five cases; three were hemorrhagic (in one of these the pancreas was almost completely destroyed without slough formation), and two resulted from abscess formation. None of these cases was accompanied by the discharge of any slough, although sloughing was one of the terminations of an acute inflammation of this viscus. The gall bladder was drained twice, each time for large numbers of stones. In one of the remaining cases it was palpated and inspected without being drained. In the remaining two cases it was not seen, owing to the pus collection being well to the left. The cholecystotomy patient died, while two of the remaining patients recovered, and the third died two weeks after from exhaustion and multiple abscesses. In conclusion Dr. Erdmann called attention to some of the pronounced symptoms, the marked pain at the onset, the sharp intoxication in some of these cases, the dyspnea and lividity seen in many, the constant backache. He emphasized the importance of early exploration when a given set of symptoms manifested themselves.

Officers Elected.

President, Floyd M. Crandall; vice-presidents, H. Seymour Houghten and William Hallock Park; secretary, John Van Doren Young; assistant secretary, J. Milton Mabbott; treasurer, Charles H. Richardson.

MEDICAL SOCIETY OF CITY HOSPITAL ALUMNI OF ST. LOUIS.

Meeting held Oct. 18, 1906.

Physician and Pharmacist.

DR. LOUIS H. BEHRENS welcomed the members of the pharmacal profession who were present, stating that as far as he knew, this was the first time in the United States that the medical profession had asked the pharmacists to discuss with them the great faults that have crept into both professions in their relationship to one another. He said that both professions have taken on fads and charlatanism and bewailed the decline of the expert pharmacist who has nothing to do in filling prescriptions but pour proprietary medicines from one bottle to another.

As for the medical profession, instead of using the remedies that have made medicine what it is to-day, it is using proprietaries of unknown and uncertain composition. Take acetanilid, for instance. Those loudest in denouncing it are prescribing proprietaries having acetanilid for their main ingredient. Some time ago there was a "cola craze." The profession was "cola mad." Now in the druggists' windows are seen immense advertisements with professional men's endorsements. The reliable iron preparations have been dropped for the numerous albumin compounds of iron with their picturesque "blood counts." He called attention to the gullibility the profession displayed in using a product alleged to be made from the waters of a celebrated German spring; nothing but Glauber's salts.

What is the cause, he asked, of this failing on the part of the two professions? Some lay it at the door of the doctor and others at the door of the pharmacist. Certain it is, that in the modern drug store, there has been an improvement and an enlargement of the soda fountains, of the cigar department, a steady increase in the size of the patent medicine department, while the dispensing department, devoted to the compounding of physicians prescriptions, is usually found in the most poorly lighted, poorly ventilated, and the dirtiest part of the pharmacy. An untidy prescription department means inferior drugs and substitution. It is here that recklessness is manifested and potent drugs become inert. There are physicians who still believe that some diseases are amenable to treatment with the proper drugs, and that the scalpel is not always necessary.

The U. S. Pharmacopeia.

DR. H. M. WHELPLEY, secretary of the U. S. P. Commission, reviewed the history of this book. Pharmacopeia, according to its Greek origin, means a work directing the preparation of

medicine and such was its meaning when the word was coined, but times have changed and the word to-day means a "book issued by some recognized authority for the purpose of furnishing physicians and pharmacists with a list of drugs and their methods of preparation." It differs from other books in that it is issued by some authority legally commissioned to establish a list of drugs of certain strength and purity. In 1618, the London Pharmacopeia was issued with the stamp of authority of the city of London. In 1639, Paris issued one, and in 1699 Edinburgh followed suit. France, in 1818, issued the first national pharmacopeia and the United States issued a national work in 1820. The first pharmacopeia issued in America was not a national work, being issued prior to the Revolutionary War as a list for a military hospital in Pennsylvania. It contained 84 formulæ for internal and 16 for external use. The writer of this book states that the list of drugs would have been larger had there been a more plentiful supply of files in the hospital to hold them.

There are now twenty-three national pharmacopeias. With a few exceptions, those countries not having one of their own, recognize one of some other country. Central America, Liberia, Costa Rica, Cuba, Philippines and Porto Rico recognize the U. S. Pharmacopeia. Costa Rica adopted the U. S. Pharmacopeia in spite of the fact that most of her pharmacists do not read the English language.

Dr. Whelpley spoke of the great advantage of an international pharmacopeia, but did not believe that this ideal could ever be realized because of the uncompromising stand taken by the various revisionists of the several countries regarding certain drugs in their respective countries and the methods of preparation. Yet a step was taken in this direction in Brussels, several years ago, by the calling of a conference to agree on a list of remedies to be used throughout the civilized world. This conference decided on the strength of potent tinctures and the arsenic preparations. The U. S. Pharmacopeia has adopted the recommendations of this conference.

The original U. S. Pharmacopeia was printed in parallel columns of Latin and English, but the edition of 1840 dropped the Latin. The eighth revision is being translated into Spanish for the benefit of Costa Rica and our island possessions.

As to the nature of Pharmacopeial revision, in foreign countries it is issued by the Government. In the United States, it is established by a body of pharmacists. Conventions are held every ten years, and a committee is appointed to follow rules laid down by the general convention. At the present time, twenty-six men compose the committee. Twelve of these men hold the degree of M.D. Only five of them are practising physicians. A board of trustees looks after the edition and sale of the book. Since this method has been adopted, the price of the book has been lowered from $4.00 to $2.50, even though the book has been growing larger. The profits which come from the sale of the book are used in defraying the expenses of the revision. The last convention was held in 1900. The next will be held in 1910. The revised Pharmacopeia is published and on sale from one to five years after the convention is held.

The convention of 1850 was the first in which the pharmacist took a hand in the compilation of the Pharmacopeia. In 1860 the members of congress who were graduates of regular medical colleges were invited to take part in the convention, but this has not been followed. In 1910 the convention will admit three delegates from each organization which was represented at the 1900 convention. It will also accept delegates from medical and pharmacal colleges and state medical institutions. They will also accept three delegates from the American Medical Association, the American Pharmaceutical Association, and the American Chemical Association, also three from the United States Public Health and Marine-Hospital-Service.

The Pharmacopeia establishes the strength, purity and method of preparation of drugs, gives working formulæ and states the average dose of medicine used internally. It does not treat of the therapeutic action of drugs, which is taken up by commentaries such as the dispensary. There are three dispensatories, the United States, the National and the American, as well as Remmington's and Caspari's. These commentaries are private enterprises.

The legal importance of the eighth revision of the Pharmacopeia is recognized by the recently enacted pure food law. Some of the state laws recognize it and some of the state boards recognize it. Some of the state laws mention the Pharmacopeia and the number will increase when the pure food law goes into effect on Jan. 1, 1907. A peculiar condition exists in Illinois, where the law designates recognition for the seventh revision, while the eighth is now the authority. The law is consequently a dead letter until this is changed. The Chinese Pharmacopeia was written in 1558 and has not been revised since.

The eighth revision of the U. S. Pharmacopeia contains twenty-eight classes of preparations, offering in all 958 preparations. The Pharmacopeia originated at the hands of physicians. Gradually pharmacists have taken an increased interest and physicians a decreased interest in it. The attitude of the American Medical Association attests to a renewed interest in the Pharmacopeia. The fact that some of the commercial drug houses are issuing epitomes of this work is an index of the pulse of the times. Missouri is particularly at fault because only one physician from this state registered at the last convention, and he did not take any part in the work.

The National Formulary.

PROF. FRANCIS HEMM of the St. Louis College of Pharmacy said that at the time when the American Medical Association took up the proprietary medicine question he asked the pharmaceutical profession to join hands with the medical men in adjusting this question. The pharmaceutical society is busy taking steps to meet with the doctors. Circular letters are now being addressed to the medical men of St. Louis inviting them to a meeting to take up these matters.

He gave a review of the history of the National Formulary. The present third revision of this book contains forty-eight different classes of preparations consisting of palatable combinations. He requested physicians to prescribe National Formulary preparations under their Latin names to prevent the passing of prescriptions from one to another, also to prevent the patient from reading the prescription, and to allow the pharmacist to get his proper remuneration. The majority of people, he said, do not appreciate the fact that the educated pharmacist is a professional man and is entitled to his just remuneration

The Prescribing of Proprietary Remedies.

DR. J. C. FALK said that the majority of physicians do not know where to draw the line in the prescribing of proprietary medicines. He described the methods of the average manufacturer in foisting on the profession unknown and uncertain preparations. This tendency of using these proprietaries can be counteracted by a better knowledge of prescription writing and consequently a better teaching of this subject in the medical colleges. The use of proprietaries depends on two forces: first, the negative force within the physician, that he has not the proper knowledge of prescription writing; second, the positive force from without on account of the influence of the proprietary medicine manufacturer and his agents.

Dr. Falk described the plight of the young doctor called to attend his first case, his dilemma in the presence of the suspicious patient, his inability to write a prescription until there floats before his disordered intellect the name of some well-known proprietary warranted to cure, his haste to write it down as a prescription, and thus the habit is formed. The remedy for this evil lies in better teaching.

DR. W. G. MOORE spoke of the good work done by the American Medical Association in fighting the nostrum evil, by *Collier's Weekly* and the *Ladies' Home Journal* in fighting the "patent medicine" evil. He said that he had heard from druggists that since this crusade the "patent medicine" business is dropping off and that the druggist is glad to get rid of the "patent medicine" business entirely because it does not appeal to the better class.

DR. BRANSFORD LEWIS said that in New York City, on Nov. 15, 1906, there will be called a conference directed against the "patent medicine" evil, a conference presided over and directed by the laity, with professional men participating but not directing.

Section Discussions

DIAGNOSIS OF TUBERCULOSIS IN INFANTS.

EDWIN E. GRAHAM, M.D.

(*Concluded from page 1557.*)

DISCUSSION.

DR. W. P. NORTHRUP, New York City, said that in 125 autopsies he made an analysis on the question of the portal of entry and collected 13 cases in which the only tubercle in the whole body was in the lymph nodes clustered about the bronchial bifurcation. With reference to prompt recovery from influenza, whooping-cough, measles and pertussis, he always inquires whether the patients have had these diseases, and if so, whether they have made complete recoveries without having a dragging fever or lumps in the neck. Dr. Northrup said that he had found typhoid fever rather unusual except in an epidemic. In all cases of doubt of an irregular fever of moderate degree, with very little loss of flesh, if the patient has had the four diseases mentioned with slow recovery, the diagnosis of tuberculosis is the most probable one.

DR. J. W. VANDERSLICE, Chicago, said that in diagnosis there are two points which, although not always of value, suggest tuberculosis. One is the accentuation of the second pulmonic, especially when there is a localized cog-wheel respiration. Recognizing a limited area of cog-wheel respiration has enabled him to make a diagnosis of tuberculosis earlier than any other one symptom he can recall.

DR. ARTHUR W. FAIRBANKS, Boston, said that in the differential diagnosis of typhoid fever and tuberculosis in the adult there is a condition which he thinks applies also in children, viz., the difference in the relation between the pulse and temperature in the two diseases. In tuberculosis the pulse is out of proportion in rapidity compared with the temperature. There is often a temperature of from 100 to 101, a pulse of 125 to 130 in the adult. Still more is it with the child. In typhoid fever the conditions are exactly opposite, the temperature running higher, the pulse lower. He was not fully sure of this last point in connection with typhoid in childhood, and spoke negatively of it, at Portland, last summer, but Dr. Morse said he had seen it in a large number of cases in children. On looking over a large number of charts Dr. Fairbanks found that it does apply in children, though not to the same degree as in the adult. In tuberculosis the rapidity of the pulse is out of proportion to the height of the temperature; in typhoid the pulse runs much below the temperature, and may even be normal.

DR. C. G. KERLEY, New York City, said that in the long indefinite temperatures sometimes seen in children, and difficult of explanation, it is wise, if they have had measles, grippe, or any of the infectious diseases, not to lose sight of the fact that the ear may possibly be the seat of the temperature. He had frequently seen cases of otitis or mastoiditis with no other manifestation than this low indefinite fever from ten days to three weeks.

DR. T. J. ELTERICH, Pittsburg, said that too often the diagnosis of typhoid fever is made in children suffering from a pronounced temperature, when latent tuberculosis is present. The cases described by Dr. Kerley of temperature continuing for several days and weeks in middle ear troubles are exceedingly common. At the Allegheny General Hospital, in children suffering from any acute or chronic diseases, the ears are carefully examined by an expert, and it is surprising to find the great number of patients who are suffering from middle ear affection in whom the diagnosis has been made of tuberculosis, typhoid fever, etc. A few years ago he say a child having a pronounced temperature for two or three weeks, which was regarded as typhoid fever, and ascites following diagnosis of cirrhosis of the liver was made by the attending physician. Later this child was stricken with tuberculous meningitis and died within a few days, the latter diagnosis being confirmed by autopsy.

DR. WILLIAM J. BUTLER, Chicago, said that it is chiefly in infants and very young children that difficulties of differential diagnosis are met with. So long as the tuberculin test is not popular for infants, there is only one absolutely certain method of differentiation in infants, and that is by post-mortem. The mere death of the infant, however, does not confirm the fact that it had tuberculosis, as such infants are far more likely the victims of bronchopneumonia. Temperature and pulse rate can hardly be relied on so far as the differentiation between typhoid fever, and tuberculosis or bronchopneumonia in children is concerned, because it is a matter of general observation that pulse rate and temperature in children do not conform to rules that will apply to the adult. Dr. Northrup's points are of greatest value in arriving at a diagnosis of tuberculosis: that is, in patients with a previous history, whether of measles, pertussis, etc., in whom continuous fever, rapid emaciation and pulmonary symptoms with little local findings persist. If there is anything that confuses one at times in the diagnosis of tuberculosis in infants, it is the decided disproportion between the clinical manifestations and the pulmonary signs present. Too frequently in advanced tuberculosis in infants and very young children clinical manifestations may be severe and the local pulmonary findings may be very scant. Especially is this so when the process has not resulted in a decided pulmonary involvement in the way of a bronchopneumonia, but in a disseminated miliary tuberculosis which not only attacks the lungs but also generalizes itself.

DR. E. E. GRAHAM said that his experience has been that the low pulse and high temperature of typhoid fever does apply in children, but not to the same extent as in the adult. In the child the pulse does not keep as low as in the adult. While the condition is of some aid, it is not of the same aid as it would be in the adult.

FOREIGN BODIES IN THE BRONCHI.

EMIL MAYER, M.D.

(*Concluded from page 1555.*)

DISCUSSION.

DR. E. FLETCHER INGALS, Chicago, agreed with Dr. Mayer so far as operation is concerned. He would not, however, insist on operations, even though he felt that they were the best. It is better to tell the friends the chances and leave them to decide, without insisting too strongly. They have to decide finally any way, and an operation be insisted on and the friends refuse it, and the patient coughs the object out after a little, the surgeon is placed in an unnecessarily awkward position. If an operation be insisted on and the patient dies, the surgeon is again in an awkward position which it is not necessary to take. The same end is accomplished by explaining the conditions and chances to the friends and telling them what is thought best. That has been Dr. Ingals' practice. It does not always work out satisfactorily because friends sometimes have very queer views. Dr. Ingals has removed many foreign bodies from the trachea by means of a straight and bent forceps and several from the bronchi by tracheotomy. Much credit, he said, is due to Killian for his presentation of the results of bronchoscopy. It is an operation that will add greatly to the laryngologist's usefulness in saving patients suffering from these accidents. As to upper and lower bronchoscopy, the upper is much more difficult and requires more time, yet there are some cases in which it would be the operation of choice. The method Dr. Ingals finally adopted for introducing the tube has proved satisfactory in that the tube can be rapidly introduced, generally in not more than three-quarters of a minute. Before he adopted this plan he had much difficulty in introducing the tube; it took three-quarters of an hour in one case. After the tube is in place it can not be manipulated nearly so easily as a shorter tube from the trachea. Lower bronchoscopy would be very much easier, probably in the majority of cases. Keeping the patient under an anesthetic as long as is necessary in upper bronchoscopy must sometimes be a detriment. There are some cases in which tracheotomy alone kills the patient, and Dr. Ingals has thought this a strong argument in favor of upper bronchoscopy; but having recently worked on a pa-

tion for an hour without removing the foreign body, although he found it, and having repeatedly seen how easy it is to lose a foreign body after having found it, and how hard it is to find it again, he is inclined to think that in most cases it would be better to do tracheotomy, as it would shorten the operation and probably lessen the danger. However, there will be a certain number of cases in which upper bronchoscopy should be tried first. Those in which the foreign body had been a long time in the bronchus would be most likely to yield good results. As a rule, these patients have not been operated on because of fear of the operation by the patient or the friends, whereas consent might be obtained to upper bronchoscopy. In children less than 3 years of age upper bronchoscopy would seldom be satisfactory because of the smallness of the tube that must be used. In some children five or six years of age it works well. In one little one of fourteen months in which a tracheotomy was done for fear that the tube could not pass through the glottis, Dr. Ingals removed the foreign body with great ease. The tracheotomy had been done perfectly, yet three hours after the operation the child gradually sank, grew weaker and died—from what cause could not be said. In another case in which he did an upper bronchoscopy the foreign body was removed without great difficulty, though a little longer time was taken than in the other case. The child appeared well after the operation, but in six hours sank and died, with symptoms like those just given. He can not understand why these children should have died, because there was much less difficulty in removing the foreign body than in others that got well. Perhaps the local application of cocain or adrenalin had something to do with the result, the drug having been applied so close to the vagus nerve. Possibly it was secondary shock of which surgeons speak. Possibly it was the long use of the anesthetic. Although Dr. Ingals used chloroform, the amount given was not great because much of the time it was not necessary for the patient to be deeply anesthetized. He did not think that a local anesthetic alone would be satisfactory, although he believed that it has been found sufficient by Killian in some of his cases.

Dr. Algernon Coolidge, Jr., Boston said that bronchoscopy for removal of foreign bodies is still in its infancy. There is no question about the value of the operation, but as yet it is not known what the mortality is, and in many cases it is not known whether the upper or lower passage is the best to adopt. As far as he has been able to ascertain, if a foreign body is inhaled about 70 per cent. of the patients will ultimately recover without operation. When the method of removal consisted generally in tracheotomy followed by fishing down into the bronchi with forceps or hooks about 25 per cent. of the patients died. Until enough cases are reported of removal of a foreign body through upper or lower bronchoscopy to make a comparison, its full value will not be appreciated. There can be no doubt that this is a life-saving advance and that the danger of inhaling a foreign body has been much reduced. As to the choice between upper and lower bronchoscopy, he thinks it will be some time before this can be definitely stated. It must be different with different operators. Upper bronchoscopy requires special skill and special apparatus. Unless the special apparatus is on hand it is a waste of time and source of danger to the patient, that is, if some time is spent in an attempt to do upper bronchoscopy and it is finally abandoned for tracheotomy, the patient may suffer in consequence of the attempt. Upper bronchoscopy, in a certain number of cases, assists in the diagnosis. In Germany tubes are passed through the larynx and trachea into the bronchi as a routine measure in many clinics. It seems to be an operation free from danger, and many cases are reported in which the diagnosis was made positive by this method. It would seem that with proper instruments and skilled technic it is justifiable to pass a bronchoscope for making a diagnosis. A requisite for upper bronchoscopy is suitable light. There is no use in trying to look down a tube 35 c.c. long, of small caliber, with defective light. That alone may be a reason for choosing the tracheal path. An ordinary head mirror is generally insufficient to look down a long tube of small caliber. The next absolutely essential instrument to have on hand is something with which to take the foreign body out after the tube is in.

The absence of a proper extracting instrument for upper bronchoscopy might easily be sufficient cause for choosing the lower route. Upper bronchoscopy is not an operation of emergency, it is an operation of the specialist, and for a specially equipped specialist. The lower operation is one by which the general surgeon will be able to save the lives of many patients. One thing the general surgeon must appreciate is that having done tracheotomy, a straight short tube, a urethroscope or cystoscope can be passed into the tracheal wound, turned at right angles and passed down to the lung. Lack of appreciation of this fact induced surgeons for decades to fish down with forceps, in the dark, often not getting the body after all. After tracheotomy is done a short probe can be pushed down to the bifurcation and can even be pushed well into a bronchus. That is the whole foundation of lower bronchoscopy. This knowledge will enable the general surgeon, by choosing a cystoscope of proper size, with forceps, to take foreign bodies out of the bronchi in the vast majority of cases.

Dr. S. H. Large, Cleveland, Ohio asked Dr. Mayer if he used a perforated tube, for if the seed blocked the right bronchus the patient could not breathe unless a perforated tube was used. He called attention to Dr. Crile's idea in working on the throat, i. e., giving a preliminary dose of atropin and morphin before the operation. Dr. Large uses the direct method, and if unsuccessful, resorts to the indirect method. The light he uses, and he has tried them all, is the electroscope. After passing the tube down he uses a Klar reflector, and by it can get any focus and also a very strong light. He uses the sitting position for diagnosis, then if he operates, the horizontal position, but in children always the recumbent position. He asked Dr. Mayer whether he uses ether or chloroform. There are cases, he said, in which the *x*-ray does not show the foreign body, on account of the shadow of the vertebræ or the smallness of the body.

Dr. Sidney Yankauer, New York City, said that any condition, in which 35 per cent. of patients die, justifies urging surgical interference to save life. It is impossible to tell in which class the individual case is placed. In a case in which he removed a foreign body, the child was in apparently good condition, and not very cyanotic. Although it was only two hours until the foreign body was removed, being all that time impacted in the right bronchus, respiration in the right lung had entirely ceased and there was contraction of the intercostal space on the right side. The passage of the bronchoscope through the larynx can be facilitated in this way: Instead of introducing the guide first and looking for the laryngeal opening, then introducing the tube, the long tube is inserted into the guide and the two passed together. The guide acts as a lever and the top of the guide being placed on the posterior surface of the epiglottis the entire larynx is raised in an anterior direction by means of the guide. As soon as the larynx is brought into view through the long tube, and, as soon as inspiration takes place, when the glottis is open, the tube can be pushed through without difficulty. Of course, it is more difficult to look through the long tube than through the guide, and it is therefore harder to find the aperture of the larynx, but any one who does bronchoscopy must become accustomed to looking through the long tube. Whether upper or lower bronchoscopy should be done depends somewhat on the nature of the foreign body. If it is of such a color and shape that it can be easily seen and grasped, the upper method is more favorable. If, however, the body is of such a nature that its color corresponds with the color of the mucous membrane, or its shape such that there is difficulty in grasping it and holding it, then it is better to go through the trachea and to use the shorter and wider tube. In one case in which the upper tube had been passed, owing to the fact that a narrow tube had been used, the tube slipped past the foreign body. The latter became lost between the bronchoscope and the wall of the bronchus. The tube was pushed down to the bottom of the bronchus, but the foreign body was not found. The color of this body was very similar to the mucous membrane.

If a foreign body has lain in the trachea for months, the tracheal mucous membrane becomes ulcerated, the body becomes incrusted with lime salts, and under these circumstances it seems to be more difficult to find it. It may be imbedded in an abscess and covered with pus. Under these circumstances the attempt to remove it by the passage of a long tube would seem to be less favorable than to do a tracheotomy, using the shorter, wider and more manageable tube. In young persons, Dr. Yankauer believes that, in the majority of cases, it is advisable to do tracheotomy and lower bronchoscopy. The prolongation of anesthesia from attempts to pass the upper tube is particularly dangerous because there is more or less inflammation of the lung following inhalation of a foreign body. Lower bronchoscopy makes it easier and quicker for the operator to find a foreign body and to remove it, and the traumatism of a tracheotomy is not so great as the traumatism resulting from unsuccessful attempts carried on for a long time to introduce a tube through the natural passages.

DR. F. S. CROSSFIELD, Hartford, Conn., said that the subject is one that necessitates the reporting of all cases of the kind, with the technic in operating, in order that all advantage may be taken of the successes of others. In those cases in which the symptoms are not urgent he thinks it advisable, always, to wait. If the symptoms are urgent it is not worth while to bother with anything but the lower operation. Do tracheotomy, go directly in, see the object and remove it at once. It is not worth while to try the x-ray, because almost all foreign bodies will not show. A case occurred in his practice recently. A child swallowed a kernel of red corn; it passed through the larynx and trachea, producing a severe cough at once. The child was taken to the hospital. The foreign body was supposed to be in the larynx, as there was loss of voice. It could not be found in the larynx, however, and the child was placed in a ward. The next day the left lung was entirely occluded; there was no respiration whatever. An immediate operation was deemed necessary, but first by irritating the larynx an attempt was made to produce a spasm and severe cough. This was a success. The patient was immediately tipped backward over the edge of the bed and the cough expelled the corn.

DR. B. R. SHURLY, Detroit, Mich., said that in view of the fact that the use of the bronchoscope is to be classified as a possible emergency operation, all the larger places should certainly be equipped with the necessary instruments for this operation when required. It should be classed in much the same way as the operation of intubation. Dr. Shurly has been through the difficulties of trying to learn to use the bronchoscope and he found a great deal of value in using the instrument on a dog at first.

DR. EMIL MAYER, New York City, said that whether an operation should be insisted on or not, that depends to a great extent on the case. In illustration of the value of such experiences, he said that the history of his connection with bronchoscopy dates back to the time when Dr. Ingals and Dr. Coolidge presented specimens of foreign body in the bronchi that had been removed from little Chicagoans and Bostonians, and it seemed to him that little New Yorkers would surely have something of the same kind. When he returned home the only bronchoscopic instruments in the city were in the possession of Dr. Gleitsmann. Dr. Mayer's assistant, Dr. Yankauer, made a temporary set and whenever they had any spare time they did bronchoscopy on the bodies at Mt. Sinai Hospital. Within a few weeks after working on these bodies the first case of a foreign body in the bronchi came to them. The rapid introduction of the tube will come eventually. The method of experimenting on the dog has the advantage of giving a knowledge of the mucous membrane. With the hot breath coming into his face and the mucus pouring into the tube, as it does, the surgeon can get nothing like it with the dog. The laryngeal image of the dog, if it has received a good dose of morphin to keep it quiet, is one of the easiest things possible to get. A view of the larynx can be obtained, a tube can be introduced and direct bronchoscopy can be done without difficulty. Dr. Mayer invariably uses ether, never chloroform. Dr. Mayer considers the Klar reflector perhaps the best so far as illumination is concerned; it is superior to the Kierstein, which gets very hot. He thinks that the introduction of the guide and the tube at the same time is not so easy as it might seem. The guide is short, has a handle and the tube is long and has a handle, and the surgeon is very far away, which adds to the difficulty. To sum up, he said, the main point is that bronchoscopy is one of the most recent advances in special work. The number of cases heretofore recorded have been recorded by the fewest men. He said that he believes it safe to say that in this country not one dozen men have reported experience with bronchoscopy, and it is only to record his experience, his failure in one case and success with the others, that he has presented the subject. Regarding the case that ended fatally, had he seen the case and decided for himself whether the patient should wait or not, he is confident he could have saved the life. It is only by knowing other men's experiences and comparing results that a maturer understanding of this still new subject can be reached.

Medical Organization

Mississippi.

TRI-COUNTY (PIKE, LEVISON AND COPIAH) MEDICAL SOCIETY.—More than 30 physicians representing the physicians of Pike, Levison and Copiah counties met in Brookhaven, July 18, and organized a Tri-County Medical Society with the following officers: Dr. Dudley W. Jones, Fernwood, president; Drs. James A. Rowan, Wesson; James W. Bennett, Brookhaven, and C. H. Bates, Sykes, vice-presidents, and Dr. William H. Frizell, Brookhaven, secretary and treasurer.

TATE COUNTY MEDICAL ASSOCIATION.—The physicians of Tate County met at Senatobia and organized a county association with the following officers: Dr. Montgomery C. Ellis, Senatobia, president; Dr. John M. Phillips, Strayhorn, vice-president, and Dr. W. D. Potter, Senatobia, secretary and treasurer.

Montana.

TRI-COUNTY (ROSEBUD, DAWSON, CUSTER) MEDICAL ASSOCIATION.—The physicians of Rosebud, Dawson and Custer counties met at Miles City and formed a society on the standard plan, with the following officers: President, Dr. Wyman W. Andrus, Miles City, Custer County; vice-president, Dr. Hathaway, Glendive, Dawson County, and secretary and treasurer, Dr. Henry J. Huene, Forsyth, Rosebud County.

Missouri.

SULLIVAN COUNTY MEDICAL SOCIETY.—The physicians of Sullivan County met at Milan, June 26, and reorganized the county society with the following officers: President, Dr. William L. M. Witter, and secretary and treasurer, Dr. John S. Montgomery, both of Milan.

Nebraska.

FURNAS COUNTY MEDICAL SOCIETY.—At a meeting of physicians of the county, held in Arapahoe, the medical society was reorganized and the following officers were elected: President, Dr. Clarence C. Green, Beaver City; vice-president, Dr. Arthur B. Hardin, Arapahoe, and secretary and treasurer, Dr. L. Wallace Rork, Oxford.

New York.

YATES COUNTY MEDICAL SOCIETY.—The Yates County Medical Society has recently been organized at Penn Yan on the standard plan, with the following officers: President, Dr. Charles M. Van Dyke, Himrod; vice-president, Dr. Cyrus C. Harvey, Dundee; secretary, Dr. Harry S. Tuthill, Penn Yan, and treasurer, Dr. Charles E. Doubleday, Penn Yan.

Indian Territory.

TWENTY-THIRD DISTRICT MEDICAL ASSOCIATION.—A meeting for the organization of this society was held in Coalgate, when the councilor for the central district, Dr. Eliphalet N. Wright, Olney, organized a society on the standard plan, with the following officers: President, Dr. Thomas J. Long, Atoka; vice-president, Dr. M. P. Skeen, Wapanuck, and secretary and treasurer, Dr. Leonard S. Wilbouer, Olney.

Pennsylvania.

FULTON COUNTY MEDICAL SOCIETY.—The organization of this society was effected at a meeting held in McConnellsburg with the assistance of Dr. Thomas M. Livingston, Colum-

Dr. councilor for the fourth and fifth districts, and the following officers were elected: President, Dr. William L. McKibben, McConnellsburg; vice-president, Dr. James S. Swartzwelder, Needmore; secretary, Dr. George M. Robinson, McConnellsburg; treasurer, Dr. John W. Mosser, McConnellsburg, and censors, Drs. Harry C. McClain, Hustontown, and Samuel S. Heop, Andover.

Virginia.

SOUTH PIEDMONT MEDICAL ASSOCIATION.—A physicians' society was recently organized at South Boston, with the following officers: Dr. S. T. Anderson Kent, Ingram, president; Drs. Henry B. Melvin, Houston; William L. Robinson, Danville, and William R. Gregory, Keesville, vice-presidents; Dr. George A. Stover, South Boston, secretary, and Dr. James L. Kent, Lynchburg, treasurer.

Medical Education and State Boards of Registration.

COMING EXAMINATIONS.

MAINE Board of Registration in Medicine, Portland, November 13. Secretary, Wm. J. Maybury, Saco.

CONNECTICUT Medical Examining Board, City Hall, New Haven, November 13-14. Secretary, Charles A. Tuttle, New Haven.

MASSACHUSETTS Board of Registration in Medicine, State House, Boston, November 13-14. Secretary, Edwin B. Harvey, State House, Boston.

WEST VIRGINIA State Board of Health, The Frederick, Huntington, November 13-15. Secretary, H. A. Barbee, Point Pleasant.

MISSOURI State Board of Health, Kansas City, November 26-28. Secretary, J. A. B. Adcock, Warrensburg.

NEW MEXICO State Board of Health, Santa Fe, December 3. Secretary, Dr. B. D. Black, Las Vegas.

PENNSYLVANIA State Medical Examining Board, Industrial Hall, Philadelphia, December 4-7. Secretary, Dr. Joseph E. Willetts, Pittsburg.

WYOMING Board of Medical Examiners, State Capitol, Cheyenne, December 5. Secretary, Dr. S. B. Miller, Laramie.

DELAWARE State Medical Society Examining Board, Dover, December 6, and by the Homeopathic Board at Wilmington on same date. Secretary of the Medical Council, Dr. P. W. Tomlinson, Wilmington.

OHIO State Board of Medical Registration and Examination, Columbus, December 11-13. Secretary, Dr. Geo. H. Matson, Columbus.

IOWA State Board of Medical Examiners, Office of State Board of Health, Des Moines, December 11-13. Secretary, Dr. J. F. Kennedy, Des Moines.

VIRGINIA Medical Examining Board, Richmond, December 11-14. Secretary, Dr. R. S. Martin, Stuart.

MARYLAND Board of Medical Examiners, 847 N. Eutaw St., Baltimore, December 12. Secretary, Dr. J. McP. Scott, Hagerstown.

OKLAHOMA Board of Medical Examiners, Guthrie, December 26. Secretary, Dr. J. W. Baker, Enid.

Maryland June Report.—Dr. J. M. Scott, Secretary of the Board of Medical Examiners of Maryland, reports the written examination held at Baltimore, June 20-23, 1906. The number of subjects examined in was 9; total number of questions asked, 54; percentage required to pass, 75. Ninety-six candidates were examined, of whom 77 pased and 19 failed.

The following questions were asked:

ANATOMY.

1. Describe the upper extremity of the femur. 2. Describe briefly the elbow joint. 3. Name the accessory sinuses of the nose. 4. Describe the collateral circulation after a ligation of the external iliac artery. 5. Name and give location of the salivary glands and state just where their ducts empty. 6. Describe the portal system of veins.

SURGERY.

1. What are the general principles governing the treatment of fractures at or near joints? 2. What conditions require and what is the usual method of performing (a) thoracentesis (b) resection of ribs. 3. Give the treatment of a sprain of the ankle joint. 4. (a) Give the differential diagnosis between chancre, chancroid and herpes preputialis; (b) Give in detail the proper treatment of each. 5. Stating your reasons, give what you consider, to be the most suitable suture material for (a) anastomosis of the intestines, (b) uniting the peritoneum, (c) muscles of the abdomen, (d) closing skin. 6. Give the treatment of severe shock after severe injury or after a major surgical operation.

PATHOLOGY.

1. Define the following terms: Coccus, bacillus, spirillum, anaërobe, facultative anaërobe. Name one anaërobeic organism. 2. Name the pathogenic cocci. Give the morphology and method of staining of each and name the varieties usually found in the following diseases: Furunculosis, tonsillitis, purulent salpingitis. 3. De-

(*Continued on page 1590.*)

The following colleges were represented:

PASSED.

	Year of Graduation.	Anatomy.	Surgery.	Pathology.	Obstetrics.	Practice.	Chemistry.	Mat. Medica.	Therapeutics.	Physiology.	Average.
Geo. Washington Univ.	1905	71	85	64	100	80	90	79	87	93	85
Geo. Washington Univ.	1906	87	78	78	90	86	75	75	75	82	80
Geo. Washington Univ.	1906	75	85	60	85	78	75	65	69	83	75
Geo. Washington Univ.	1906	78	80	85	85	86	84	88	85	88	84
Univ. of Maryland...	1906	90	95	90	100	79	85	83	88	95	89
Univ. of Maryland...	1906	80	90	66	85	82	76	78	88	81	80
Univ. of Maryland...	1906	81	90	77	85	85	20	83	93	87	77
Univ. of Maryland...	1906	88	95	92	100	88	40	68	92	92	84
Univ. of Maryland...	1906	93	90	92	100	88	86	86	92	98	91
Univ. of Maryland...	1906	78	95	78	90	87	58	79	84	97	82
Univ. of Maryland...	1906	79	95	85	100	86	88	78	82	97	87
Univ. of Maryland...	1906	91	98	96	100	89	93	94	93	95	94
Univ. of Maryland...	1906	77	85	88	90	77	77	85	88	84	83
Univ. of Maryland...	1906	73	85	83	80	75	84	78	85	90	82
Univ. of Maryland...	1906	78	90	70	90	75	52	84	76	80	77
Univ of Maryland...	1906	90	92	87	100	81	81	78	85	90	87
Univ of Maryland...	1906	94	90	80	90	78	84	87	90	97	87
Univ. of Maryland...	1906	76	80	69	100	83	68	83	78	80	79
Univ. of Maryland...	1906	91	94	94	85	89	88	69	73	83	85
Univ. of Maryland...	1906	80	95	68	90	83	71	93	94	85	84
Univ. of Maryland...	1906	88	92	88	90	80	78	88	90	81	87
Univ. of Maryland...	1906	88	90	57	80	75	48	80	82	75	75
Univ. of Maryland...	1906	79	95	76	100	69	49	79	87	60	77
Univ. of Maryland...	1906	88	80	78	90	83	45	72	90	81	78
Univ. of Maryland...	1906	69	80	78	90	70	45	79	83	81	75
Univ. of Maryland...	1906	79	90	76	65	80	50	78	82	75	75
Univ. of Maryland...	1906	80	90	88	75	76	91	90	92	91	83
Univ. of Maryland...	1906	70	75	75	90	75	51	79	85	75	75
Univ. of Maryland...	1906	78	80	81	95	75	75	77	82	87	78
Univ. of Maryland...	1906	87	98	85	100	78	85	85	92	100	90
Univ. of Maryland...	1906	90	85	94	85	88	60	76	95	85	84
Univ. of Maryland...	1906	89	90	78	90	84	75	85	90	80	83
Univ. of Maryland...	1906	89	90	90	100	93	80	88	95	85	90
Univ. of Maryland...	1906	80	85	53	90	90	30	79	93	75	75
Univ. of Maryland...	1906	92	95	97	100	85	75	91	88	95	90
Univ. of Maryland...	1906	87	95	95	75	91	85	74	77	97	86
Univ. of Maryland...	1906	74	95	81	95	75	78	89	92	87	85
Univ. of Maryland...	1905	56	90	76	90	75	59	74	87	68	75
J. Hopkins Med. Sch'l	1906	83	90	94	85	92	95	84	90	90	89
J. Hopkins Med. Sch'l	1906	78	90	92	100	90	76	92	88	96	89
J. Hopkins Med. Sch'l	1906	91	95	84	85	83	76	82	85	89	85
J. Hopkins Med. Sch'l	1906	90	95	96	100	93	94	92	95	100	95
J. Hopkins Med. Sch'l	1906	92	80	89	84	84	94	90	90	86	88
J. Hopkins Med. Sch'l	1906	66	85	97	75	92	91	80	95	95	86
J. Hopkins Med. Sch'l	1906	92	96	97	90	92	96	89	97	96	93
J. Hopkins Med. Sch'l	1906	89	85	98	90	93	96	87	90	98	80
J. Hopkins Med. Sch'l	1906	88	100	92	90	90	80	90	92	100	91
J. Hopkins Med. Sch'l	1906	91	95	90	80	90	94	95	95	96	91
J. Hopkins Med. Sch'l	1906	79	95	98	95	92	84	87	93	98	91
J. Hopkins Med. Sch'l	1906	81	95	96	90	97	89	87	95	98	92
J. Hopkins Med. Sch'l	1906	96	95	96	90	93	50	85	85	95	83
J. Hopkins Med. Sch'l	1906	91	100	96	84	85	65	68	93	96	86
J. Hopkins Med. Sch'l	1906	92	90	91	90	99	85	93	92	95	91
J. Hopkins Med. Sch'l	1899	89	95	96	95	97	91	87	90	100	93
Baltimore Med. Coll..	1906	75	80	57	90	79	49	90	80	75	75
Baltimore Med. Coll..	1906	89	90	62	95	77	60	81	78	100	81
Baltimore Med. Coll..	1906	56	90	92	90	81	50	73	92	95	79
Baltimore Med. Coll..	1906	97	98	88	90	89	75	73	95	100	89
Baltimore Med. Coll..	1906	84	80	75	90	75	60	70	93	85	79
Baltimore Med. Coll..	1906	76	90	84	80	82	25	60	85	93	75
Baltimore Med. Coll..	1906	73	80	89	90	83	45	77	86	97	80
Baltimore Med. Coll..	1906	96	90	98	100	97	85	81	94	100	93
Baltimore Med. Coll..	1906	88	90	91	90	90	90	92	88	87	89
Baltimore Med. Coll..	1906	84	95	99	100	95	95	97	97	98	94
Baltimore Med. Coll..	1906	81	90	93	85	78	88	71	80	98	84
Baltimore Med. Coll..	1906	75	85	75	90	87	64	92	93	93	83
Baltimore Med. Coll..	1906	67	75	69	90	77	50	80	78	70	75
Coll. of P. & S., Balt.	1906	90	95	93	80	80	30	76	92	90	80
Coll. of P. & S., Balt.	1906	75	80	77	85	79	79	89	75	88	80
Coll. of P. & S., Balt.	1906	87	75	68	80	81	60	75	77	90	77
Coll. of P. & S., Balt.	1906	91	90	82	90	89	93	93	90	100	90
Coll. of P. & S., Balt.	1906	91	90	86	80	88	50	68	81	83	79
Jefferson Med. Coll...	1904	75	90	75	85	79	76	93	80	77	81
Jefferson Med. Coll...	1906	87	95	75	90	88	75	90	75	88	85
University of Virginia	1906	68	98	75	85	86	75	80	90	78	81
Univ. of Leinberg, Aus.	1902	88	100	92	80	90	98	82	90	95	90
Maryland Med. Coll..	1906	71	85	61	90	81	77	82	85	66	77

FAILED.

Univ. of Maryland...	1906	82	95	62	85	75	34	65	77	75	72
Univ. of Maryland...	1906	62	90	57	95	75	33	71	69	90	71
Univ. of Maryland...	1906	58	85	71	85	75	48	71	77	85	72
Univ. of Maryland...	1906	75	85	28	75	75	19	74	77	67	63
Univ. of Maryland...	1906	61	75	67	90	70	48	68	82	70	70
Maryland Med. Coll..	1906	48	50	59	75	77	25	87	67	84	63
Maryland Med. Coll..	1906	39	72	32	80	75	20	77	80	68	60
Maryland Med. Coll..	1906	22	40	26	80	49	12	45	46	81	44
Maryland Med. Coll..	1906	73	65	68	75	61	58	83	80	75	70
Coll. of P. & S., Balt.	1906	50	70	54	75	67	38	69	67	63	61
Coll. of P. & S., Balt.	1906	39	75	37	95	69	65	75	85	75	68
Baltimore Med. Coll..	1906	30	70	56	90	77	38	77	75	80	65
Baltimore Med. Coll..	1906	50	80	27	75	66	58	87	80	66	65
Baltimore Med. Coll..	1906	81	70	53	85	84	30	68	79	90	71
Baltimore Med. Coll..	1906	55	75	55	75	65	20	62	65	60	58
Long Is. Coll. Hosp...	1905	72	85	30	75	63	65	31	75	69	62
Jefferson Med. Coll..	1906	68	75	52	80	81	76	79	81	63	72
Jefferson Med. Coll..	1906	63	75	56	90	77	42	69	77	68	68
Jefferson Med. Coll..	1906	65	80	59	80	76	45	78	78	79	71

scribe in detail the process of cavity formation in a case of tuberculosis of the lungs. Give the morphology of and describe in detail the method of staining of the tubercle bacillus. Name two other bacilli with similar staining properties. 4. Describe the pathologic changes as regards the urinary tract one would expect to find in a case of hypertrophy of the prostate of long standing. 5. Describe macroscopically the changes one would expect to find in the appendix and surrounding structures in a case of catarrhal and one of gangrenous appendicitis, respectively. 6. Give a gross and microscopic description of a cross section of a myomatous uterus. In what other localities is this species most frequently found?

OBSTETRICS AND GYNECOLOGY.

1. Describe the preliminary arrangements and preparation for an approaching accouchement. 2. What is your treatment for a case of placenta prævia about the eighth month of pregnancy? 3. Give diagnosis of a pregnancy at the third month. 4. Describe the mechanism of a podalic version and mention the points of danger to the fetus. 5. Describe a complete abdominal hysterectomy. 6. Describe some conditions of the uterus which may be relieved by an amputation of the cervix.

PRACTICE.

1. Define: (a) Tachycardia, (b) leukemia, (c) cretinism, (d) hydrothorax, (e) ascaris lumbricoides. 2. Name symptoms of: (a) Ulcer of stomach, (b) acute nephritis, (c) scarlatina. 3. What means would you employ in the diagnosis of diseases of the lungs, stomach and kidney? 4. Name some of the sequelæ of typhoid fever. Name some causes of intestinal obstruction. 5. Give treatment of diabetes mellitus and of laryngeal diphtheria. 6. Give diagnosis and treatment of tetanus.

CHEMISTRY.

1. Define the terms: Element, compound, mixture, and explain the use of the suffixes: Ous, ani, ic. 2. State the chemical composition of atmospheric air. What is the difference between expired and inspired air and explain how this is brought about? 3. State the properties of good drinking water. What are its most dangerous impurities and why? and describe the methods in use for its purification. 4. Give the chemical definition of a simple ether. Give the chemical constitution and the physical and chemical properties of sulphuric ether. Is this term a correct one and why? 5. What chemically are the vegetable alkaloids? State their general characteristics and give the effect of solvents on them and their salts. 6. Suppose a specimen of urine of normal specific gravity and of either neutral or faintly acid reaction shows on boiling a precipitate. What substances may this indicate and how are they to be differentiated?

MATERIA MEDICA.

1. Give the composition of compound cathartic pills, black wash, and Dover's powder. 2. Give the official Latin title of paregoric; name all its constituents and give the amount of the principal drug in one ounce of the mixture. 3. What is the official name of calomel; what drugs are incompatible with it and why? 4. Give the botanical name and official preparations of digitalis, with dose of each. 5. Name the official vegetable acids. 6. Give the source of acetanilid, caffein, and salol.

THERAPEUTICS.

1. Give the general rule for calculating doses for children. 2. What are the modes of administration of medicines? How does dosage vary in each with that of the mouth? 3. What are the physiologic effects and medicinal uses of the preparations of belladonna? 4. Give the therapeutic uses of the iodids. How are they best administered? 5. What are antipyretics? Describe general use of and how administered. 6. Name the official digestive ferments; give their physiologic action and therapeutic uses.

PHYSIOLOGY.

1. Describe the circulation of the blood. 2. What is coagulation of the blood? (a) Give some of the theories of coagulation and state how it may be hastened or retarded. (b) What is intravascular clotting? How may it be caused and why does it not take place under ordinary circumstances? 3. What is meant by the heat-regulating mechanism of the body? Explain the maintenance of a constant body temperature. 4. Describe the physiologic function of the kidneys. 5. Describe the mechanism of respiration, both normal and forced. 6. Describe the phenomena and give some of the theories of sleep.

The General Medical Council of Great Britain: Its Powers and Its Work.

In the *Lancet*, Oct. 6, 1906, Dr. Donald MacAllister describes the functions of the General Medical Council of Great Britain. The council, he says, is in fact neither a parliament for making professional laws nor a union for protecting professional interests. When the council was created, nearly 50 years ago, the declared purpose of the legislature was simply to conserve the interests of the public by enabling it to distinguish between qualified and unqualified practitioners. The instrument which parliament set up for the purpose of marking this distinction is the "Medical Register," the keeping of which is entrusted to the council. On the register are placed the names of those who have passed certain tests of professional fitness. These are called registered practitioners, and these alone the law declares to be duly or legally qualified. Thus the two great functions which the council in the public interest discharges are, first, to prevent the unfit from gaining access to the register, and, second, to remove the unworthy. It is a council on education and a board of registration.

Although it is a council on education, it neither teaches nor examines. It can not lay down a code or curriculum compulsory on all medical students. Its statutory powers are strictly limited. It can order the visitation and inspection of the various examinations held by universities and corporations in the United Kingdom for the purpose of testing candidates for their respective medical degrees or diplomas. It can require from these bodies information concerning the course of study and the age of candidates which they prescribe. If from the inspection of the examinations or the information supplied as to the curricula the council comes to the conclusion that either are insufficient, it has no power to disallow them or to order that they shall be amended. It forwards its report to the body concerned, takes note of any observations the body may make thereon, and if it is still convinced that the training or the test is insufficient, it brings the question before the privy council.

In this and in other matters the council is in close administrative relation with the privy council, a government body. If the medical council neglects its duty in anything, the privy council may formally direct that the duty shall be performed and in default may itself perform it. The privy council has power to supplement as well as to supersede. It can do what the medical council is unable to do. If it sees fit it can declare that an insufficient diploma shall no longer be recognized as legally registrable; and, if circumstances alter, it can rehabilitate the diploma and make it valid again.

Although its positive legal powers are thus limited, yet in practice they have proved to be more efficient than they seem in theory. By a gradual process of evolution and the exercise of moral pressure they have come to be quite adequate for the purpose.

The medical council is also a board of registration. By successive judicial decisions it has been laid down that in its procedure the council, sitting as a tribunal, must as nearly as possible follow the forms and rules customary in other courts. It has no authority to compel the attendance of witnesses, to administer oaths, or to call for the production of documents. It has only one judgment to give when a charge is proved to its satisfaction, namely, guilty of infamous conduct in a professional respect, and only one sentence when judgment is given, namely, erasure from the register. From this sentence and judgment, given after proper inquiry and without malice, the High Court of Justice has pronounced that there is no appeal.

The council is a court of professional discipline. Practices which 40 or 50 years ago were so common and so lightly regarded that they excited little notice and less reprehension but are now repugnant to the general sense of the profession are sternly repressed by the council. For instance, respecting the professional offense of "covering," the council sent out a warning notice. All qualified practitioners were notified that the abuse of their qualifications whereby an unqualified person was enabled to treat patients as if he were qualified, under "cover" of his employer, was in its nature fraudulent and dangerous to the public, and that such an offense rendered them liable to be judged guilty of infamous conduct.

More recently the practice of issuing objectionable advertisements or of employing or sanctioning the employment of canvassers with the object of procuring patients, was brought before the council in connection with particular flagrant cases. Each case had to be dealt with on its own merits. Sometimes the case was fought, in others the accused practitioner preferred to discontinue the practice complained of and submitted himself to the clemency of the council. A warning notice was issued, pointing out the public detriment, and professional discredit attaching to unworthy methods of attracting practice. Notice was given that practitioners who employed them, or sanctioned their employment, were liable to the penalty of erasure from the register. Thus it will be seen that even with its apparently limited powers as a court, and notwithstanding the apparent inadequacy of the statutes which govern it, the council does in fact formulate, and by formulation makes explicit, fresh applications of the law to the growing complexity of modern conditions.

The constitution of the council has had much to do with the effectiveness of this body. Each of 24 licensing bodies appoints a member of the medical council. Five members are appointed directly by the sovereign, on the advice of the privy council, and five members more are appointed by direct election, under a universal suffrage, by the registered practitioners resident within the kingdom. The total number of members is 34. Of these, 14 only are required by law to be medical practitioners. The sovereign and the universities may appoint laymen, if they choose, but they have not done so. It was proposed at one time that the sovereign appoint lay members of the House of Lords, as being persons of knowledge and experience of public affairs who are independent of transi-

tory politics, they would increase the administrative efficiency of the council, correct its tendency to professional bias, and be always at hand to bring forward in parliament measures of medical importance. However, the constitution of the council makes it a most excellent council of medical education. Its members are not delegates of constituent bodies and sections, but members of the council. Each member represents the council in his own faculty, and not vice versa.

From the point of view of the council as a corporate entity, it is also of inestimable advantage that each of its constituent bodies is represented on it. Its members are so many envoys from the universities and corporations. Each is in immediate touch with his governing body; he is by hypothesis in good standing and influence there, or he would not have been chosen. While he is an envoy of the body, he becomes in turn an envoy of the council to the body. From his own knowledge of the course of the discussion, the arguments used, the examples proposed for imitation, he is in a position to explain and commend the council's decision to his colleagues at home. He can make clear the scope and bearing of resolutions which are not always self-explanatory.

The preliminary education and registration of students is a matter of statute.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulæ and outlines of treatment are answered in these columns.]

Laryngitis.

In the treatment of acute laryngitis Grayson states that general measures are of value in combating the trouble, such as intestinal evacuation by means of small doses of calomel followed by a saline purge. The patient's room should be moistened by the addition of steam. If there be a rise in temperature a vascular depressant combined with a diaphoretic is recommended. He advises for this purpose drop doses of the tincture of aconite given frequently. The cough may be quieted and the secretion of the larynx increased by a combination similar to the following:

℞ Morphinæ sulph.
Antimonii, āā ..... gr. 1/25 | 0024
Ammon. chloridi ..... gr. ii | 12
Pulv. ipecacuanhæ ..... gr. ⅛ | 008

M. Fiat capsula. Sig.: One such capsule every four hours.

The use of the voice must be absolutely prohibited and the diet restricted to the simplest foods.

The local treatment, according to Grayson, should consist of very mild and soothing applications such as Dobell's solution and a warm sedative inhalation given two or three times a day. This may be prepared by adding a teaspoonful of the compound tincture of benzoin to a pint of hot water and inhaling the steam through a cone. The water should not be boiling, according to Grayson, but is best prepared by adding one part of cool water—60 F.—to two parts of boiling water. If the cough is frequent and accompanied by much pain, he recommends that one or two drops of chloroform or a teaspoonful of paregoric be added to the benzoin. After two days of the foregoing treatment it is recommended that an astringent spray be employed. For this purpose he advises the following combination:

℞ Aluminis ..... gr. x | 65
Aquæ ..... f℥i 30 |

M. Sig.: To be sprayed into the larynx.

Later in the course of the disease inhalations containing oleum eucalypti or oleum pini sylvestris may be employed.

The following combinations are recommended by Hare in the treatment of acute laryngitis:

℞ Menthol ..... gr. iii | 20
Petrolati liq. ..... f℥i 30 |

M. Sig.: To be used as a spray, at the same time instructing the patient to inhale.

A watery spray should never be employed in the treatment of the acute cases of laryngitis, as it sometimes tends to aggravate the condition. If the laryngeal irritation, however, has been brought on by the inhalation of particles of dust, he recommends the following combination as a spray:

℞ Sodii chloridi ..... gr. xv 1 |
Acidi borici ..... gr. x | 65
Sodii boratis ..... gr. x | 65
Aquæ rosæ ..... f℥iii 90 |

M. Sig.: To be used as a spray.

The external treatment in severe cases consists in the application of a mustard plaster or other forms of heat over the larynx, at the same time advising a hot mustard foot bath and a warm drink just previous to retiring.

The internal treatment, according to the author, consists in obtaining proper elimination from the bowels by means of calomel, followed by a saline if constipation be present, and in the administration of full doses of aconite and sodium bromid as follows:

℞ Tinct. aconiti ..... m. xii-xxiv | 75-1.65
Sodii bromidi ..... ℥ii 8 |
Aquæ menth. pip. q. s. ad ..... f℥iii 90 |

M. Sig.: One dessertspoonful every four hours. Or:

℞ Potass. bromidi ..... ℥iv 15 |
Tinct. aconiti ..... m. xii | 75

M. Fiat chartulæ No. xii. Sig.: One powder every four hours in water.

The foregoing may be continued until convalescence occurs, as it tends to soothe inflamed surfaces by allaying the arterial disturbance.

In some cases he recommends the application of the tincture of iodin to the larynx and episternal notch. In children this may be substituted by applying the following combination:

℞ Olei succini (amber) ..... f℥iv 15 |
Olei olivæ ..... f℥xii 45 |

M. Fiat linimentum. Sig.: Apply locally.

The *Cyclopedia of Medicine* recommends the following combination internally in the treatment of acute laryngitis:

℞ Tinct. aconiti ..... m. x | 65
Tinct. belladonnæ ..... f℥ss 2 |
Glycerini ..... f℥ii 8 |
Sol. potass. citratis q. s. ad ..... f℥ii 60 |

M. Sig.: Two teaspoonfuls every three hours in water.

Locally, small pieces of ice may be dissolved in the mouth and cold applied externally. For this purpose Leiter's coil is recommended. As a sedative inhalation the following is advised:

℞ Mentholi ..... gr. ii | 12
Spts. chloroformi ..... f℥ss 2 |
Tinct. benzoini co. q. s. ad ..... f℥ii 60 |

M. Sig.: Two teaspoonfuls to a pint of hot water and inhale every two hours.

Acute laryngitis in children is best relieved by the administration of the syrup of ipecac dram ½ (2.00) every fifteen minutes until vomiting takes place and the throat may be swabbed with the glycerite of tannin.

Some authors recommend a combination similar to the following:

℞ Liq. morph. hydrochlor. (1 p. c.) |
Vini antimonialis, āā ..... f℥i 4 |
Liq. ammon. acetatis ..... f℥i 30 |
Aquæ camphoræ q. s. ad ..... f℥v 150 |

M. Sig.: From a dessertspoonful to a tablespoonful every four hours.

In children the following may be used:

℞ Apomorphinæ hydrochlor. ..... gr. 1/3 | 002
Acidi hydrochlor. dil ..... m. iii | 18
Syrupi senegæ ..... ℥v 18 | 5
Aquæ q. s. ad ..... ℥iss 45 |

M. Sig.: One teaspoonful every hour.

THE LARYNGITIS OF VOCALISTS.

In cases of subacute laryngitis of vocalists Yeo recommends the following outline of treatment:

1. An aperient.
2. A laryngeal spray of a 1 per cent. solution of cocain.
3. The following combination as a lozenge:

℞ Morphinæ sulph. |
Cocainæ hydrochlor., āā ..... gr. 1/150 | 0004
Tinct. aconiti ..... m. 1/6 | 01
Pulv. althææ rad ..... gr. ss | 03

M. Fiat lozenge. Sig.: One such lozenge to be taken into the mouth frequently.

4. As a preparation for a vocal effort after the acute symptoms have subsided gr. 1/60 (.001) of strychnin after meals.

SIMPLE CHRONIC LARYNGITIS.

In cases of simple chronic laryngitis the following combination is recommended:

℞. Eucalyptol ..... gr. iii |20
Spiritus camphoræ ..... f℥iv 15|
Tinct. benzoini co. q. s. ad..... f℥ii 60|

M. Sig.: Two teaspoonfuls to a pint of hot water and inhaled at bedtime and on arising.

After the morning inhalation it is recommended that the patient remain indoors for an hour or two. Locally it is advised that silver nitrate be applied as follows:

℞. Argenti nitratis..... gr. v-x |30-.65
Aquæ ..... f℥ss 15|

M. Sig.: Apply locally to the enlarged follicles of the pharynx.

As a lozenge to be dissolved in the mouth the following is recommended:

℞. Pulv. guaiaci ..... ℥ii 8|
Olei caryophylli..... m. ii |12
Olei limonis..... m. v |30
Pulv. acaciæ ..... ʒss 2|
Pulv. sacchari..... ʒi 4|
Confectio rosæ q. s. |

M. Fiat lozenges No. xxx. Sig.: One lozenge to be dissolved in the mouth every four hours.

As an inhalation or spray in chronic laryngitis Yeo recommends the following combination:

℞. Acidi tannici..... gr. xv 1|
Spts. vini rectif..... f℥iiss 10|
Aquæ q. s. ad..... ℥ii 60|

M. Sig.: To be used locally as an inhalation or a spray.

Or:

℞. Olei pini sylvestris..... ℥ii-iii 8-12|
Magnesiæ carb. ..... ʒi-iss 4-6|
Aquæ q. s. ad..... ℥iii 90|

M. Sig.: One teaspoonful to be added to a pint of water at 150 F. and inhaled for five minutes two or three times a day.

As a gargle for hoarseness from fatigue of the voice the following combination is advised:

℞. Acidi tannici ..... ʒi 4|
Glyceriti boroglycerini ..... ʒii 8|
Tincturæ capsici ..... f℥iss 6|
Aquæ rosæ q. s. ad..... f℥x 300|

M. Fiat gargar. Sig.: To be used frequently as a gargle.

Gonorrheal Rheumatism.

W. J. Robinson, in an abstract in *Merck's Archives*, states that if after getting rid of the gonococcus there is evidence of involvement of the joints, the following combination is recommended as a local application:

℞. Acidi salicylici ..... ʒi 4|
Mentholis ..... gr. xv 1|
Guaiacolis ..... ʒss 2|
Alcoholis ..... f℥i 30|

M. Sig.: To be painted over the affected areas with a camel's hair brush and the parts covered with cotton and oil silk.

Or, as a liniment, the following:

℞. Methyl salicylatis ..... ℥ii 8|
Guaiacolis ..... ʒi 4|
Olei veratrinæ |
Linimenti camphoræ, āā..... f℥i 4|
Linimenti belladonnæ ..... f℥i 30|

M. Sig.: Rub in well and cover with cotton and oil silk or muslin.

As an ointment the following composition:

℞. Chloralis hydratis ..... ʒi 4|
Camphoræ |
Mentholis, āā ..... ʒss 2|
Acidi salicylici |
Guaiacolis, āā ..... ʒi 4|
Atropinæ ..... gr. ii |12
Petrolati ..... ℥i 30|
Lanolini q. s. ad..... ℥ii 60|

M. Sig.: Apply externally.

Medicolegal

Liability of Charitable Hospital for Negligence—Failure of Hospital or Individual to Warn Nurse of Patient Having Contagious Disease—Duty as Employer.

The Supreme Court of New Hampshire says, in Hewett vs. Woman's Hospital Aid Association, that a charitable institution has certain duties to perform toward those with whom it is associated, which it can not violate with impunity, in the absence of some express exemption of a legislative character, is not debatable. The sanctity of its general trust fund or property does not make that result necessary, or, on grounds of public policy, desirable. The liability of charitable corporations in actions of tort (for wrongful act or negligence) is frequently enforced. If the language of some courts is broad enough to deny the liability of charitable corporations in all actions of tort, it cannot be regarded as a discriminating statement of the law on the subject.

The duties of the defendant to the plaintiff when she was employed to nurse a diphtheria patient had their inception in the contract of employment. She was engaged to do a necessary part of the work of maintaining a hospital for the sick. For this labor she was paid. If she was an apprentice receiving small remuneration in money, in consideration of the instruction and experience she received in practical nursing, she was none the less an employé of the defendant. An apprentice learning a trade occupies the position of a servant with reference to his employer, and obviously the latter's duty to inform him of the dangers of his occupation is greater than in the case of an experienced workman. While performing the necessary work of nursing in the institution, the plaintiff was not, like a patient, the recipient of the defendant's charity. She was doing the defendant's proper work, under its direction, and for its benefit in the discharge of its assumed duties. She was as much an employé of the hospital in respect to this particular work as she would have been if she had been a graduate nurse receiving full nurse's pay. The fact that, at the time she was employed, she represented herself to be older that she was did not relieve the defendant of its ordinary duty to her as its servant. Her apparent youthfulness, general intelligence, and practical experience in nursing were facts for the consideration of the jury on the question of the degree of care the defendant was bound to exercise.

If the plaintiff had been employed by an individual to attend a member of his family afflicted with smallpox, of which he had knowledge, but of which he did not inform her, and she took the disease without fault on her part, and suffered damage therefrom, it would not be seriously denied that he was guilty of actionable negligence in not informing her of the danger to which he exposed her. It was his duty arising from his employment of her, or from the contractual relation of master and servant existing between them, to warn her of the danger incident to the service which he knew, or under the circumstances ought to have known, and of which he knew she was ignorant, though in the exercise of ordinary care. And this duty is a nondelegable one. To say that a similar duty was not imposed on the defendant for the benefit and protection of the plaintiff, because it is a charitable corporation, is to relieve such corporations from the reasonable obligation of exercising the care ordinarily required of, or contractually assumed by, men in general in the prosecution of their legitimate business. The necessity for such an exceptional holding is not apparent. Since the property of the defendant is held for the general purpose of maintaining a hospital, without other specific limitation, it is no more exempt from being appropriated to the payment of damages occasioned by the negligence of the hospital than is the property of an individual, which he holds for commericial or charitable purposes, for the consequences of his negligence.

In conducting the affairs of a hospital, its officers and agents are as liable to commit acts of negligence as are the officers and agents of a railroad or other business corporation. Men in general are not uniformly careful. Experience shows that negligence—the failure to exercise ordinary care—is to be expected when men engage in industrial pursuits. It may, not

inappropriately, be said to be necessarily incidental in the accomplishment of most practical results through the agency of man. The donors of the defendant's property for hospital purposes were not ignorant of this fact, and are presumed to have given the trust property knowing that it might be required for the liquidation of claims in tort, as well as for claims in contract, incurred in carrying out the purposes of the corporation. Indeed, its conceded authority to contract for the employment of nurses and other necessary agents would seem to include power to respond in damages for all breaches of such contracts, one essential or incidental element of which is its duty to exercise care as well as its duty to pay stipulated compensation. No conditions were imposed on the defendant, either by its charter or by the donors of its property, by which the contracts of employment it was obliged to make with its servants should have a different effect from that usually given to such contracts, or that the relations between it and its employés should be legally different from those usually subsisting between master and servant. There is, therefore, no substantial reason for holding that it did not owe the duty to the plaintiff of warning her of the dangers of her employment, under the law as applied to the ordinary relation of master and servant.

The evidence tended to show that one of the patients whom the plaintiff nursed had a form of diphtheria, that a culture taken from this patient and examined by a bacteriologist contained diphtheria bacilli, and that the physician in charge of the patient, and who was also the manager of the hospital, was duly informed of the result of the examination. If the jury found these facts to be true, they were warranted in the conclusion that the hospital had notice of the contagious character of the patient's disease, and that it was its duty, acting as ordinarily prudent men would have acted under the same circumstances, to disclose the danger to the nurse, who was ignorant of its existence. The court can not say that a reasonable doubt in the mind of the physician, in her diagnosis of the patient's disease, as to its true character, would justify her, who, as the representative of the hospital, was bound to exercise reasonable care for the plaintiff's safety, in omitting to inform her that the disease might be of a diphtheritic character. The hospital might be bound to warn her before the physician had reached a satisfactory diagnosis.

Liability for Performance of Unauthorized Operation.

The Supreme Court of Minnesota rendered a decision last year in the malpractice case of Mohr vs. Williams which was reported at considerable length in the Medicolegal Department, on page 573, of THE JOURNAL of August 19, 1905. It was then held, among other things, that, in the absence of consent, express or implied, the defendant had no authority to perform an operation on the plaintiff's left ear, and that, if the operation was performed without either express or implied authority, it was wrongfully and unlawfully done, and in law constituted assault and battery, in which case the amount of recoverable damages would depend on the character and extent of the injury inflicted, considering the nature of the malady intended to be cured, the beneficial nature of the operation, and the good faith of the defendant. A verdict for $14,322.50 was obtained, but, on the ground that this was excessive, the Supreme Court granted a new trial.

This new trial resulted in a verdict for the plaintiff for $3,500, but the trial court granted a motion for judgment in the defendant's favor, notwithstanding the verdict, apparently on the ground that the evidence conclusively proved that an emergency existed which called for immediate treatment, and that the operation was justified on that ground, conceding no consent had been given, either expressly or by implication. But the Supreme Court, on the case being again appealed to it, holds that it was error to order judgment for the defendant notwithstanding the verdict, as the evidence did not conclusively show that the defendant, an ear specialist, had authority, express or implied, to operate on the left ear of his patient, and that no damage resulted. At the same time, it is of opinion that the defendant should have an opportunity to have the trial court pass on a motion he made for a new trial on the ground that the verdict was excessive, etc.

Furthermore, on this second appeal to it, the Supreme Court says that from an examination of the record it is again of opinion that the evidence did not conclusively establish the fact that the left ear was in such serious condition as to call for an immediate operation. If the patient placed herself in the defendant's care for general ear treatment, why did he not in the first instance make a thorough examination of the left, as well as the right, ear? was a pertinent inquiry. He testified that he found an obstruction in the left ear which in itself was unnatural, and yet he did nothing to ascertain the real condition for nearly three weeks thereafter. If the critical condition discovered at the time of the operation was such as to be reasonably anticipated, then the long delay without attention or treatment was not readily explained, and was suggestive of inattention and negligence, and had some bearing on the subsequent conduct of the defendant and his explanation of what occurred.

The physician referred to in the first report as being present when the operation of ossiculectomy on the left ear was performed, and designated as the plaintiff's family physician, the Supreme Court now says the record disclosed was not her physician, but had treated her sister, and was asked to be present at the operation simply to guard against the effects of the anesthetic. There was no evidence in the record to justify the conclusion that he had any authority to consult with the defendant and speak for the patient as to what might be necessary to do. But the court does not mean by this that the fact that he was consulted and expressed an opinion might not be given weight in determining the real condition of the left ear, and the good faith of the defendant in operating.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.
October 27.

1 *Hospital Reform in a New Light. H. S. Stark, New York.
2 Choice of Cow's Milk. J. A. Gilbert, Portland, Ore.
3 *Remarks on Cesarean Section. P. F. Martin, Indianapolis.
4 *Joint Affections of Hemophilia. J. G. Sheldon, Kansas City, Mo.
5 *Mortality from Lobar Pneumonia in High Altitudes. I. W. Brewer, U. S. Army.

1. **Hospital Reform in a New Light.**—Stark states that the treatment of the sick poor alone should not claim the attention of hospitals supported by the city or state. These institutions should become centers for the medical education of the masses. Here the people ought to be able to receive instruction in rules which govern health and prevent disease. Provision should be made for delivering lectures during the winter months. If this work were taken up, the house staffs of the hospitals should be increased; the staff of visiting physicians might well be augmented also. The medical and surgical work in the hospitals should not be centralized in the hands of a few. Stark suggests that members of a staff who have served continuously in one capacity for a specified number of years be retired from active practice.

3. **Case of Cesarean Section.**—Martin describes a case of eclampsia occurring in a patient with a markedly contracted pelvis. In this eclamptic attack there was absence of the usual accompanying renal elements. There was no evidence of organic lesion other than increased tension of the pulse, with accentuated second aortic sound, a low excretion of urea, and a slight rise of temperature. The pelvic and fetal measurements were such that a natural termination of labor was impossible. The mother and child are both in good health.

4. **Joint Affections of Hemophilia.**—Sheldon says that the importance of diagnosing these joint affections can not be overestimated. König has divided the symptoms of these cases into three stages: 1. Those in which intra-articular hemorrhage is the only change; 2. after repeated hemorrhages have resulted in marked articular and periarticular changes, and have limited joint motion, and, 3. when the process has resulted in ankylosis. The early symptoms are the most important. In the primary attack, the joint, with or without the

history of a slight injury, suddenly becomes painful, swollen, hyperemic and tender. There is extreme pain, but not marked tenderness. There is evidence of fluid in the joint cavity. As a rule there is a rise of temperature. The symptoms subside in about a week, only to recur again. The joint should be aspirated by a small needle. Nothing can be done for the old cases.

5. **Mortality from Lobar Pneumonia in High Altitudes.**—Brewer presents a summary of the statistics obtained at three military hospitals in Arizona and New Mexico. Fort Huachuca is situated in the southeastern part of Arizona, at an elevation of 5,042 feet above the sea. Its annual mean temperature is 60 degrees. Fort Grant is about 60 miles north, with practically the same climate. Fort Wingate is in the western part of New Mexico, at an elevation of 6,822 feet. The mean annual temperature is 61 degrees. The records cover the period from 1884 to 1904. In all there were 61 cases of lobar pneumonia treated, with a mortality of 18 per cent., while for the army at large for the same period the mortality was 17.4 per cent. These statistics seem to show that elevation has little to do with the mortality from lobar pneumonia. Comparing the stations themselves, the mortality is found to vary inversely with the altitude.

New York Medical Journal.

October 27.

6 *Indications for Surgical Intervention in Diseases of the Stomach. J. A. Blake, New York.
7 *Sclerosis of the Coronary Arteries. H. Brooks, New York.
8 American Aborigines from a Hygienic Standpoint. A. L. Benedict, Buffalo.
9 *Present Treatment of Diphtheria by the Medical Profession. W. S. Cornell, Philadelphia.
11 Mandragora. An Historical Sketch. A. R. Kennedy, Philadelphia.
11 Mandragora, An Historical Sketch. A. R. Kennedy, Philadelphia.
12 Comparison of Results in Blood Counting Between the Einhorn-Laporte and Thoma-Zeiss Methods. E. V. Murphy, Newport, R. I. and G. T. Strodl, New York.
13 Typical Case of Tabes Dorsalis in a Negress. W. G. Bowers, Philadelphia.

6. **Surgical Intervention in Diseases of Stomach.**—Blake, in reviewing the indications for surgical intervention in diseases of the stomach, says that it is a mistake, at least in the present status of gastric surgery, to consider surgery a cure-all in diseases of the stomach. In fact, he continues, gastric surgery is more likely to be hindered than advanced by an improper selection of cases through a mistaken idea or comprehension of its possibilities. He believes that operation should not be refused in any case where there is a chance for benefit, particularly when drainage of the stomach is interfered with. The main, although not the only, indication for surgical interference in diseases of the stomach is evidence that it is improperly performing its motor functions, that is, emptying itself.

7. **Sclerosis of Coronary Arteries.**—Brooks found coronary disease present in such a degree as seriously to affect the nutrition of the heart muscle and nerves in 270 out of 1,000 consecutive autopsies. Of the cases in this series which showed arterial disease, 195 of the 250 males showed thickening of the coronaries, while of the 126 women, 75 showed the same change. One of the patients was a boy 15 years old. Senility, *per se*, was concerned in the etiology of the 270 cases but 16 times. The average age of the patients was about 45 years. The history of the abuse of alcohol was obtained in 107 cases. Nephritis was present in 35 cases; syphilis in 30 cases; tuberculosis in 20 cases; cancer in 4; diabetes in 6, and rheumatism and myelitis 3 times each. Of those conditions aside from nephritis which cause hyperarterial tension, Graves' disease appeared twice, acromegalia seven times, plumbism twice, and the excessive use of tobacco nine times. Obesity was a factor in four instances.

Brooks found that the most frequent type of coronary sclerosis is an endarteritis in which proliferative changes take place in the sub-endothelial layer of the intima. True acute arteritis is rare in the coronary arteries. Certain cases of coronary disease appear to show primarily pathologic changes of the adventitia in greatest degree. Of Brooks' 270 cases all but 15 showed lesions of the myocardium apparent to the unaided eye. Two hundred and fifteen cases presented changes in the heart muscle of sufficiently severe disease to be noted as contributory to the cause of death. The most frequent lesion presented was fatty heart. Atrophy of the heart was found in 64 instances; fibrosis of the myocardium in 24 instances; well-marked cardiac hypertrophy in 35 instances, and acute dilatation in 20 instances. Aneurism and cardiac rupture were found as direct results of disease in the coronary vessels in two instances each. Brooks is convinced that in many cases diagnosticated as pseudo-angina pectoris are in reality coronary sclerosis in which the spasmodic contractions of the vessels is less marked than in manifest angina pectoris. In 152 cases in which a diagnosis of arteriosclerosis of the peripheral arteries was made, the coronary arteries were found seriously diseased 116 times. After considerable experience Brooks thinks he is justified in assuming that the presence of coronary sclerosis of a greater or less degree in many cases in which the blood pressure is above 180 mm., and particularly in those in which otherwise unexplained paroxysmal increase in the blood pressure is found, especially when intervening periods of low blood pressure are demonstrable.

The treatment is hygienic, eliminative and symptomatic. Of the drugs commonly used Brooks prefers potassium iodid, in from 5 to 15-grain doses three times daily; strontium bromid, in from 7 to 14-grain doses once or twice daily; chloral hydrate; morphin; amyl nitrate; nitroglycerin; digitalis; strophanthus, and ergot. The indications for each are discussed in full.

9. **Treatment of Diphtheria.**—Cornell analyses the treatment employed in 616 cases of diphtheria as reported to the Philadelphia bureau of health. Of this number 458 cases were treated with antitoxin. Cornell commends this treatment.

10. **Advanced Tuberculosis.**—Bonney reports 10 cases in justification of the belief that a permanent arrest of the tuberculous infections is sometimes possible, even in those cases which may be regarded at first as utterly hopeless. No special methods of treatment were employed other than those familiar to every physician of experience in the management of pulmonary tuberculosis.

Boston Medical and Surgical Journal.

October 25.

14 Classical Symptoms of Hysteria. P. Janet, Paris.
15 Epidemic Cerebrospinal Meningitis, A study of Its Etiology, Diagnosis and Epidemiology, Based Chiefly on the Cases Occurring in Worcester, Mass. E. L. Hunt, Worcester, Mass.
16 Routine Treatment of Syphilis with Intramuscular Injections of Mercury Salicylate. W. H. Palmer, Providence, R. I.
17 *External Eye Inflammations of Doubtful Origin. H. G. Langworthy, Dubuque, Ia.

17. **Inflammation of Eye.**—Langworthy reports two cases one a bilateral orbital cellulitis and exophthalmus of obscure origin, simulating a cavernous sinus thrombosis and double frontal involvement. It is presumed that the infecting organism was the pneumococcus. The other case was one of acute bilateral edema of the eyelids of unknown etiology. The case seemed to be one of angioneurotic edema or a double frontal sinusitis.

St. Louis Medical Review.

October 20.

18 Realdus Columbus of Cremona. L. C. Boislinière, St. Louis

Lancet-Clinic, Cincinnati.

October 27.

19 Vaginal Tampon: Some Points of Practical Interest. C. T. Souther, Cincinnati.
20 Intracranial Cephalhematoma. E. S. M'Kee, Cincinnati.

The Ophthalmic Record, Chicago.

September.

21 Septic Infection Following Ophthalmia Neonatorum. S. Stephenson, London, England.
22 *Fergus Operation for Ptosis. H. W. Woodruff, Joliet, Ill.
23 Case of Hypermetropia of 21 Diopters Simulating Myopia. E. Stieren, Pittsburg, Pa.
24 *Another Successful Magnet Operation, but with an Unusual Termination. H. R. Young, Burlington, Ia.
25 Epithelioma of the Orbit. R. H. Johnston, Baltimore.
26 Dislocation of Lachrymal Gland. T. W. Crowder, Sherman, Texas.
27 Recent Advances in Ophthalmologic Therapeutics. W. F. Marple, New York.
28 *Pseudo-Optic Neuritis. T. Faith, Chicago.
29 New Integral or Fused Bifocal Lenses. H. V. Würdemann, Milwaukee.
30 Papilloma of the Plica Semilunaris. R. H. Johnston, Baltimore.

22. **Fergus Operation for Ptosis.**—Woodruff has performed this operation three times with most excellent results. There are no visible scars and the operation is more easily performed. It is really an advancement operation, the only external excision being in the brow.

24. **Magnet Operation.**—In the case reported by Young a scale of iron was removed from the eye with the giant magnet. One week after the operation the patient, a man, became violent. He died on the sixth day of his frenzy without having regained consciousness, death apparently being due to exhaustion, for neither pulse, temperature, nor any other symptom was characteristic of the structural lesion. The postmortem findings were negative.

28. **Pseudo-Optic Neuritis.**—Faith reports one case and concludes that the diagnosis may be settled on the following points: 1. The absence of changes in the retina surrounding the papilla, together with normal visual fields. 2. The absence of variations in the appearance of the disk or retinal vessels from time to time. 3. The absence of decreasing changes in the central visual acuity from time to time.

The American Journal of the Medical Sciences, Philadelphia.
October.

31 *Experience with the Simpler Methods of Psychotherapy and Reëducation. L. F. Barker, Baltimore.
32 *Value of a Study of the Apical Outline in the Diagnosis of Incipient Pulmonary Tuberculosis. C. L. Minor, Asheville, N. C.
33 *Roentgen Rays in the Early Diagnosis of Pulmonary Tuberculosis. W. Lehman and W. C. Voorsanger, San Francisco.
34 Hematologic Studies in Tuberculosis. A. C. Klebs, Dunning, Ills., and H. Klebs, Chicago.
35 *Further Notes on the Serum Diagnosis of Tuberculosis. H. M. Kinghorn and D. C. Twitchell, Saranac Lake, N. Y.
36 *Clinical, Anatomic and Pathologic Comparison of Tuberculous Cavities in the Lungs. H. R. M. Landis, Philadelphia.
37 Statistics of Diet in Sanatoria for Consumptives. I. Fisher, New Haven.
38 *Relative Value of the Home Treatment of Tuberculosis. L. F. Flick, Philadelphia.
39 Etiology, Prognosis and Indications for the Surgical Treatment of Tuberculous Peritonitis. R. Douglas, Nashville, Tenn.
40 *Protection of Infants and Young Children from Tuberculous Infection. J. L. Morse, Boston.
41 Tuberculosis Among the Negroes. T. J. Jones, Hampton, Va.
42 *Tuberculosis Among the Oglala Sioux Indians. J. R. Walter, Pine Ridge, S. D.
43 *Organic Heart Diseases and Immunity from Pulmonary Tuberculosis. B. Stow, New York City.

31. **Psychotherapy and Re-education.**—Since Oct. 1, 1905, Barker has had a large number of cases—more than 80—in which psychotherapeutic measures were the mainstay. He reports and summarizes 15 cases as follows: 1. Hysterical attacks; headaches; fainting spells with rigidity; no attacks after one week of treatment. 2. Aerophagia; chronic constipation; hot flushes; symptoms disappeared after two weeks of treatment; discharged at the end of one month apparently well. 3. Hysterical crises; choreiform movements; hemianesthesia; tremor; rapid improvement. 4. Hysterical crises; globus; dermatographia; contracted visual fields; rapid improvement. 5. Hysteroneurasthenia; pathologic character; extreme fatigability and irritability; multiple painful sensations; tremor of eyelids; morbid fears; resistance to treatment for several weeks; then rapid improvement; gain of 36 pounds in weight. 6. Neurasthenia; fatigability; incapacity for work; cure. 7. Fixed ideas of unworthiness and impossibility of happiness; despondency; fear of insanity; cure. 8. Hysterical crises; cephalalgias; blepharospasm; rapid improvement. 9. Neurasthenia of two years' duration; hypochondriasis; thoracic pain and oppression; fear of aortic aneurism; rapid cure. 10. Severe cephalalgias of many years' duration; emaciation; nervousness; rapid cure; gain of 30 pounds in weight. 11. Nervous gastropathy of five years' duration; recent exacerbation; fear of gastric ulcer; came to hospital for surgical operation; headaches; vasomotor disturbances; rapid cure; gain of 12 pounds in weight. 12. Insomnia; incapacity for work; fear of insanity; obesity; rapid cure; weight reduced 12 pounds. 13. Enteroneurosis; mucous colitis; nervous incontinence of feces; vasomotor disturbances; rapid improvement; gain of 12 pounds in weight. 14. Neurasthenia; hemorrhoids; anemia; nicotinism; nervous dyspepsia and diarrhea; fatigability; despondency; rapid cure. 15. Nervous gastropathy; epigastralgia; nausea; belching; fear of gastric ulcer; rapid cure. Barker says that the psychotherapeutist should be an honest man and an expert clinician. He should recognize the horrible reality of the misery of the psychoneurotics. He may be more successful in understanding and treating his patients if he has had, himself, at least some little experience with the fatigues and fears of neurasthenia, provided he has made a good recovery. He must be interested in functional disturbances and not simply in anatomic lesions, and he must understand that hysteria and psychasthenia are as much diseases as are pneumonia or gonorrhea, and often incapacitate the sufferer for a much longer period of time. He should be skilled in all the modern refinements of diagnosis, and should exhaust them in the study of his case before beginning his treatment.

32. **Apical Outline in Diagnosis of Incipient Pulmonary Tuberculosis.**—Minor presents his impressions of the diagnostic value of outlining the apices of the lung in pulmonary tuberculosis, based on the marking of such outlines for the past six or more years in all his cases. He found that in early tuberculosis, especially of the apex, but also of lower portions of the lung, careful percussion will very generally demonstrate a dislocation of the inner line outward, and that the inner line, both anteriorly and posteriorly, is likely to be the earliest affected. The posterior inner line changes chiefly or only in its upper two-thirds. The dislocation inward of the outer border generally occurs later, and a change of both inner and outer lines is naturally less common than of the inner or outer alone. In early cases the lines do not approximate at the top, but join their fellows from the rear; in old cases with marked fibroid shrinkage they often run together to an apex before they reach the border of the trapezius. Minor found the diagnostic value of these outlines in earlier cases, and to some extent their prognostic value later, to be considerable; not, of course, when taken alone, but in combination with other things. A slight inward alteration of a border anteriorly and posteriorly carefully verified, will raise to a far higher value ambiguous auscultatory signs. Outward dislocation is neither so early nor quite so easy to determine, but if certainly demonstrated has equal value.

33. **Röntgen Rays in Early Diagnosis of Pulmonary Tuberculosis.**—Lehmann and Voorsanger plead for the use of the *x*-ray as a means of diagnosis in pulmonary tuberculosis. Williams' diaphragmatic sign; the finding of more or less centrally located affections; haziness of the apex or of the whole lung, which anatomically corresponds to thickening of lung tissue, and proof of the existence of peribronchial enlarged glands, are four important points in beginning tuberculosis, often escaping clinical detection, and, if discovered by the *x*-rays, speak almost conclusively for a beginning process in the lungs. They present brief notes of a series of cases selected from a varied material, which show that the clinical and the *x*-ray findings have agreed in the main, but that in the majority of the cases the *x*-rays afforded valuable information as to the extent of the lesions which were often more widespread than the ordinary clinical evidences seemed to suggest. When the diagnosis was in doubt, on account of absence or insufficiency of clinical signs, the *x*-rays showed a peribronchial or bronchial gland affection, the value of which in prognosis, as well as in diagnosis, is of enormous importance. In a few cases, involvement of an apex evident clinically was not recognizable by the *x*-rays, because recent infiltration, though sometimes sufficient to cause clinical signs, may not be sufficiently dense to produce a shadow or haziness on the *x*-ray plate or screen.

35. **Diagnosis of Tuberculosis.**—In the tests performed by Kinghorn and Twitchell, clear, fresh human serum was used, and was obtained either from the lobe of the ear or from a vein in the arm. When agglutination took place in a dilution of 1 to 5 the reaction was considered positive. The time limit given to the test was five hours, not more. The tests were made at room temperature. Agglutination was observed by the naked eye up to five hours. Results were considered positive only in those tubes which showed well-marked flocculi easily visible to the naked eye, and with subsequent sedimen-

tation and clearing. The total number of patients tested was 247. Of these 70 were persons in apparently good health, 155 were patients with pulmonary tuberculosis, 22 were patients with doubtful tuberculosis or with other diseases. Of the 247 patients 212 reacted positively (85.82 per cent.); 35 failed to react (14.18 per cent.). Of the 70 healthy persons 59 reacted positively (84.28 per cent.); 11 failed to react (15.72 per cent.). Of the 155 patients with pulmonary tuberculosis 135 reacted positively (87.09 per cent.); 20 failed to react (12.91 per cent.). Of the 22 patients with suspicious signs of tuberculosis and with other diseases 18 reacted positively; 4 failed. From these investigations Kinghorn and Twitchell conclude that the serum diagnosis of tuberculosis as used by Arloing and Courmont is not a specific sign of the presence of clinical tuberculosis, since healthy and tuberculous serums have practically the same agglutinating property, and that the serum diagnosis of tuberculosis, and especially for the early diagnosis of tuberculosis, is of no value.

36. **Tuberculous Cavities in the Lungs.**—In comparing the clinical with the pathologic findings in 50 cases Landis found that of the 76 cavities present 58 had been recognized, while 18 had escaped notice. The majority of the cavities not recognized were very small; three of them, however, had attained the size of a lemon. In the 58 cavities which were correctly diagnosed, lack of expansion, retraction of the apex, and flattening of the chest wall anteriorly were the rule. Bulging or fulness of the chest wall over the site of the cavity was not met; in those cases in which it could not be elicited the tactile fremitus was exaggerated in 34 instances and diminished in 13. The percussion note had a tympanitic quality in 36, was dull in 16, hyper-resonant in 3, and in 3 instances was of the cracked-pot variety of tympany. The breath sounds were noted as cavernous in 29, amphoric in 19, bronchial in 13, and distant and indefinite in 7. There was an absence of râles in 9. When present they were noted as being fine and moist in 16, consonating in 17, and gurgling in 16. Vocal resonance was exaggerated in 51 instances, and diminished in but 1. Whispering pectoriloquy was present in 53 instances and absent in 5.

In 8 instances cavities were correctly diagnosed as being communicating; this was about one-fourth of those actually of that character. The diagnosis was based on the breath and voice sounds having several points of maximum intensity, in conjunction with a large area of coarse bubbling râles with a metallic quality, and symptoms indicating a rapid destruction of tissue. The physical signs over those cavities (18) which were not recognized were almost invariably dulness, bronchial breathing, increase in vocal and tactile fremitus and absence of whispering pectoriloquy. Most of these cavities were found postmortem to contain thick, creamy pus. In the 10 instances in which cavities were believed to be present, but which at postmortem were not found, consolidated tissue around a bronchus was the source of error in 5. In one case there was no adequate explanation. In 4 cases the error was probably due to transmission of the amphoric breathing and whispering pectoriloquy from a cavity on the opposite side. In these 4 instances the supposed cavities gave signs posteriorly only. Cavities, as a rule, give more marked signs anteriorly. Thus, of the 58 under consideration, the signs were present anteriorly, or anteriorly and posteriorly in 55 instances, while but 3 gave signs posteriorly alone. From this analysis it is evident that any one of the above signs is suggestive of a cavity and that the probability of its existence is increased by the combination of any two or more of them.

38. **Home Treatment of Tuberculosis.**—Flick believes that the treatment of tuberculosis can be better carried on at present in the home of the patient, in those places at least where expert services can be given, than in a health resort. For people living in places where expert services can not be had, it is undoubtedly better to go to a health resort than to remain at home.

40. **Tuberculous Infection in Children.**—Morse states that the separation of children from tuberculous adults is the most simple and rational method of protecting them against contagion. Such separation, however, is often impossible. The only practicable method then is the observation in the best way possible in the individual case of the principles of hygiene and habitation. When a family is in reduced circumstances the public must step in and help. What can be done as to the separation of the children from the patients and as to sanitation depends in each case on the circumstances of the family and the provisions for the care of the tuberculous made by the public. That is to say, protection against tuberculosis is largely a question of money.

42. **Tuberculosis Among Indians.**—According to Walker, tuberculosis among the Indians does not differ in any respect from tuberculosis among white people. The infecting material is the same, and is produced and disseminated in the same way, individuals are infected in the same manner, and the disease runs the same course, produces the same results, and is subject to the same measures, remedial or preventive, as among white people. It does not show any especial affinity for the Indian, nor affect him under any condition in which it would not affect a white man. There is no inherent peculiarity of the Indian which renders him more liable to infection with tuberculosis than a white man under like circumstances. Walker thinks that a practical method for suppressing tuberculosis among the Indians would be by the establishment of a sanitary camp, where all that are infected with the disease should be collected and maintained, under competent supervision, until each case terminates.

43. **Heart Disease and Immunity from Pulmonary Tuberculosis.**—The object of Stow's paper is to show that those organic heart lesions accompanied by well-marked pulmonary stasis, thus concentrating in the lungs the immunizing agents of the blood, whatever they may be, are rarely followed by phthisis pulmonalis, or if this previously existed, they exert a salutary effect on it, and the reverse conditions frequently are followed by pulmonary tuberculosis.

Buffalo Medical Journal.

October.

44 *The Use of Local Anesthetics in Operations on the Chest and Abdomen. M. Clinton, Buffalo.
45 Management of Pulmonary Tuberculosis. J. C. Young, Cuba, N. Y.
46 *Vaginal Cesarean Section in the Treatment of Puerperal Convulsions. H. E. Hayd, Buffalo.
47 Eyestrain and Crime. G. M. Gould, Philadelphia.

44. **Local Anesthesia.**—Clinton is of the opinion that certain cases of profound sepsis, notably empyema and local abscess of the abdomen, are more safely attacked under local anesthesia. In order to satisfy his own mind as to the relative importance of the solution used, or the manner of using it, he had a patient prepared for a double herniotomy. With a large syringe and a small needle the skin was infiltrated with plain sterile warm water. Next the fatty tissue was blown up, and then an incision was carried to the external oblique. The patient did not feel any pain. By ballooning up each layer of muscle and fascia with warm water, and massaging it before it was cut it was found that anesthesia was as complete as if a strong cocain solution had been used.

46. **Vaginal Cesarean Section.**—Hayd reports the case of a primipara, aged 23, which he believes demonstrates clearly the wisdom of emptying the uterus as quickly as possible in a bad case of convulsions, and the ease and facility with which the delivery can be accomplished by employing the anterior cervical incision of Dührssen.

Journal of the Michigan State Medical Society, Detroit.

October.

48 *Possibilities and Limitations of Laboratory Diagnosis. J. Sill, Detroit.
49 *Physical Disturbances in Distant Parts of the Body Due to Eye-Strain. J. G. Huizinga, Grand Rapids.
50 *Treatment of Ununited and Compound Fractures with Bone Pins. A. I. Lawbaugh, Calumet.
51 *Treatment of Fractured Patella. C. S. Oakman, Detroit.
52 Observations on Rheumatism and its Treatment, with the Mineral Baths of Mt. Clemens. R. Leuschner, Mt. Clemens.

48. **Laboratory Diagnosis.**—Sill believes that the laboratory can give to the clinician many aids in making his diagnosis. Examinations of the urine, blood or other fluids, secretions and excretions of the body frequently will swing the weight of the evidence from one side of the balance to the other and determine a doubtful diagnosis. Frequently after a diagnosis is

made exact information gained from the laboratory will be of great value for prognosis or will suggest important modifications of treatment. The laboratory can not, except in a few instances, make diagnoses for the clinician. The more complete is the coöperation between the clinician and the laboratory man, the more information can the worker in the laboratory give the practicing physician, and with increasing opportunity to correlate laboratory findings with clinical conditions will come an increasing ability to determine the significance of pathologic changes in a given case.

49. **Effects of Eyestrain.**—Huizinga reports three cases in which eyestrain caused functional disturbances, but he calls attention to the fact that while eyestrain is a very important factor in the etiology of the vast majority of these disturbances, it is generally only one of several factors, each one of which must receive recognition. Although many of these disturbances can not be relieved without relieving the attending eyestrain, it is equally true that the vast majority of patients also require other treatment in addition to glasses in order to obtain permanent results. He does not think that glasses should receive all the credit for the results obtained.

50. **Bone Pins in Ununited Fractures.**—Lawbaugh uses ivory nails or pins for the purpose of fixation in both compound and ununited fractures whenever such a method is indicated. Two pins are used, unless the bone is small, as in the case of the radius or ulna, and even then two small pins are preferable to a single large one. The pins are placed at an angle with one another so as to brace the fragments. To give additional firmness to the parts, he also places a strong piece of kangaroo tendon around the fragment. This is absorbed, as are the pins, and causes no irritation. He urges the use of bone pins for the following reasons: 1. The parts are held more firmly than by any other method. 2. The ivory pins can be thoroughly sterilized, and are applied with as great or even greater ease than any other material. 3. They cause no irritation and are completely absorbed.

51. **Treatment of Fractured Patella.**—Oakman declares that operation should never be considered under any but ideal conditions, nor in sick or aged patients. In operating in recent cases, absorbable sutures should be applied to the soft parts. For fixation the wire splint should be used first and then plaster-of-Paris. As soon as the plaster splint is applied the patient should begin to use crutches.

New Orleans Medical and Surgical Journal.

October.

53 Confusion Between the Terms Contagion and Infection or the Mosquito Craze. C. Faget, New Orleans.
54 Statistics of Pulmonary Tuberculosis in the Registration Area of the United States for the Fifteen Years from 1890 to 1894, Based on the Returns of the United States Census Bureau. I. W. Brewer, Ft. Huachuca, Ariz.
55 Isolation Hospitals. H. P. Jones, New Orleans.
56 How the Yellow Fever Situation was Handled in Kenner in 1905. S. D. Gustine, Kenner, La.
57 An Epidemic History, with Kindred Remarks. F. R. Bernard, Lake Providence, La.
58 Dengue and Yellow Fever. G. F. Patton, New Orleans.
59 Early Diagnosis and Treatment of Phthisis Pulmonalis. L. Sexton, New Orleans.
60 *Two Cases of Gonorrheal Arthritis, Treated by Bier Hyperemia. C. W. Allen, Crowley, La.

60. **Gonorrheal Arthritis.**—Allen reports two cases of gonorrheal arthritis that were treated successfully by means of the Bier hyperemia method. The bandage usually was applied at noon, just above the knee, and frequently was left on all night. The treatment was continued about 14 days in one case and about 10 days in the other. In the second case the wrist joint was affected.

Bulletin of the American Academy of Medicine, Easton, Pa.

October.

61* How May the Medical and Teaching Profession Coöperate to Improve the Moral, Mental and Physical Condition of the Young. S. A. Knopf, New York.
62 *Duty of the Family Physician in Regard to the Proper Mental and Physical Development of the Children under his Care from Infancy to Adolescence. D. A. Sargent, Cambridge, Mass.
63 *Training of the Mentally and Morally Defective Child. M. P. Groszmann, Plainfield, N. J.
64 *Sanitary Regulation of the School Room with Reference to Vision. C. A. Wood, Chicago.
65 *Coeducation. G. S. Hall, Worcester, Mass.
66 *Advantages or Disadvantages of Coeducation. W. T. Smith, Hanover, N. H.
67 *Dangerous Influences of Overtaxing the Girl's Mind, Particularly at the age of Puberty. A. P. Clarke, Cambridge, Mass.
68 *Id. L. L. Bulkley, New York.

61, 62.—See THE JOURNAL, July 28, 1906, page 301.

63 to 68.—See THE JOURNAL, Aug. 4, 1906, page 383.

Ohio State Medical Journal, Columbus.

October 15.

69 Cancer of the Uterus. J. F. Baldwin, Columbus.
70 Cancer of Cervix; Choice of Operation. M. A. Tate, Cincinnati.
71 Plan of Excision in Cancer of the Head and Neck and an Analysis of 132 Cases. G. W. Crile, Cleveland.
72 Problem in the Etiology of Esophageal Carcinoma. N. W. Brown, Toledo.
73 Lymphatics of Malignancy. S. D. Foster, Toledo.
74 Physiologic and Pathologic Effects of Alcohol and other Narcotics. S. J. Hatfield, Indianapolis, Ind.

Iowa Medical Journal, Des Moines.

October 15.

75 Gastric Neuroses. F. J. Murphy, Sioux City.
76 Infection and Immunity. R. H. Parker, Storm Lake.
77 Chairman's Address, Section of Materia Medica, Iowa State Medical Society. W. C. Post, Maquoketa.
78 Accuracy in Therapeutics. W. F. Waugh, Chicago.
79 Therapeutic Accuracy. A. L. Belt, Gilmore City.
80 Some Thoughts on Autotoxemia. E. E. Fisher, Rodney.
81 Report on Phytolacca Decandra. C. H. Herrmann, Amana.
82 Uric Acid. F. S. Clarke, Le Mars.
83 Injury to Superficial Palmar Arch. H. Sigworth, Anamosa.

American Practitioner and News, Louisville.

October.

84 Croupous Pneumonia. A. M. Barnett, Louisville.
85 Tuberculosis. J. M. Morris, Louisville.
86 Appendicitis. V. A. Voyles, Gotebo, Okla.

Bulletin of the Johns Hopkins Hospital, Baltimore.

November.

87 *The Future of the Medical Profession. C. W. Eliot, Boston.
88 *The Unity of the Medical Sciences. W. H. Welch, Baltimore.
89 The International Congress of Tuberculosis, Paris, 1905. H. B. Jones, Wheeling, W. Va.
90 Governor John Winthrop, Jr., of Connecticut, as a Physician. W. R. Steiner, Baltimore.
91 Advantages of Local Sanatoria in the Treatment of Pulmonary Tuberculosis. D. R. Lyman, Wallingford, Conn.

87, 88.—See THE JOURNAL, Oct. 6, 1906, page 1115.

Woman's Medical Journal, Toledo, Ohio.

October.

92 Observations on some Climate Resorts of Europe. E. H. Root, Chicago.
93 Dissociation of the Personality. J. G. Kiernan, Chicago.
94 The Courts of Sonoratown—The Housing Problem as it is to be Found in Los Angeles. B. B. Stoddard, Los Angeles.

Southern Medicine and Surgery, Chattanooga, Tenn.

October.

95 Pathology and Treatment of Hypertrophied Prostate. W. A. Bryan, Nashville, Tenn.
96 Operative Treatment of Fibroid Tumors of the Uterus. J. M. Maury, Memphis.
97 Life Insurance in its Relation to the Medical Profession. J. L. Crook, Jackson, Tenn
98 Diagnosis and Treatment of Syphilis. J. W. Handly, Nashville.

The Medical Fortnightly, St. Louis.

October 25.

99 Errors in Medicine as a Science. J. Clements, Kansas City.
100 Typical Chauffeur Injury. R. Muhsam, Berlin.
101 Peritoneal Tuberculosis. J. Mc. H. Dean, St. Louis.

Canadian Practitioner and Review, Toronto.

October.

102 Directions for Nurse and House Physician, Burnside Lying-in-Hospital, Toronto.
103 Case of Primary Carcinoma of the Liver. J. G. Fitzgerald, Baltimore.
104 Medical Thoughts, Facts and Fancies. J. S. Sprague, Sterling.
105 Dionin in Diseases of the Eye. R. W. Rutherford, Chatham, Ontario.

Virginia Medical Semi-Monthly, Richmond.

October 12.

106 Posterior Displacements of the Uterus, with a Description of Mayo's Operation. S. McGuire, Richmond.
107 Hyoscyamin and Aconitin in the Treatment of the Fever Accompanying Suppuration. W. H. Birchmore, Brooklyn, N. Y.
108 Mouth-Breathing, its Causes, Effects and Correction. C. M. Sandusky, Jacksonville, Fla.
109 Epilepsy. J. S. DeJarnette, and J. W. Freed, Staunton, Va.
110 Treatment of Malignant Growths by the Roentgen Rays. E. G. Williams, Richmond.
111 Primary Abdominal Pregnancy. E. T. Hargrave, Norfolk, Va.

Texas Medical News, Austin.

October.

112 Diagnosis and Management of Occipitoposterior Position. A. L. Hathcock, Palestine, Texas.
113 Treatment of Typhoid Fever. D. Y. Willbern, Runge, Texas.
114 Medical Coöperation and the Advantages of Medical Organization. J. M. Frazier, Belton, Texas.
115 Chronic Tobacco Poisoning. E. H. Eastman, Hot Springs, Ark.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

October 13.

1 Study of Tropical Diseases. K. Macleod.
2 Universities and Medical Education. J. Crichton-Browne.
3 *Pneumococcal Infection During Early Life. H. Ashby.
4 *Osteogenesis Imperfecta. R. W. Lovett and E. H. Nichols.
5 *Abdominal Atony of Rickets, Its Significance and Its Treatment. W. Ewart.
6 *Treatment of Tuberculous Abscess. C. L. Starr.
7 *Rheumatism in Children. A. D. Blackader.
8 *Prevention of Acute Intestinal Diseases of Summer. C. G. Kerley.
9 *Dietetic Treatment of Enterocolitis. J. L. Morse.
10 *Medicinal Treatment of Enterocolitis. L. E. La Fetra.
11 *Study of the Absorption of Fats in Infants. T. P. Shaw and A. L. C. Gilday.
12 Milk Laboratory and Its Relation to Medicine. R. Vincent.
13 Congenital Pyloric Stenosis. E. Cautley.
14 Pyloric Stenosis in Infants. H. J. Stiles.
15 *Case of Pyloric Hypertrophy. C. P. Putnam.
16 Then and Now in Surgery. C. A. Ballance.

3. **Pneumococcal Infection During Early Life.**—Ashby believes that the pneumococcus plays the chief rôle in bronchopneumonia and in the pneumonias which occur as sequelæ of the zymotic diseases, and that a pneumonic infection is not a local disease of the lungs, but that the cocci enter the blood stream, multiply there and are carried to distant organs. A pneumococcic infection involving the lungs primarily is much more apt to spread locally to parts in contact than to affect distant parts by the blood stream. Ashby cites several cases of pneumonia complicated by meningitis. In one of these cases there existed a pneumococcal meningitis, basic and spinal, which ran a subacute course more or less after the fashion of a bronchopneumonia. He says that a greater care of infant life, better nutrition, purer air, and a higher plane of civilization will do more than all else to lower the mortality from pneumonic infection.

4. **Osteogenesis Imperfecta.**—Lovett and Nichols report a case which came to autopsy. The patient, male, weight at birth 8 pounds, was born by an easy labor of about nine hours in duration. The points of interest in the case were in connection with the legs. Both thighs and both legs were broken. The right femur showed evidence of a healed fracture at about its middle. The fracture was united with an angle outward and forward, and on the skin over the thigh on the anterior and outer part of the leg was a small dimple. Union was firm, there was but little callus, and the fracture must have occurred at least three or four weeks before birth. The left femur was broken at the middle, it showed slight crepitus, and was a loose fracture. Both tibias were broken at the junction of the lower and middle third of the leg, the fibulas apparently not being broken. Both tibias, in addition to being broken, were curved forward and slightly outward, and so far as could be judged in the femur, there was a forward and outward bowing there. About six weeks after birth there was noticed a fracture of the left clavicle, and an old callus was found on the right humerus. The baby lived to the age of 10 months and died of some general affection not intimately associated with the fractures. There were in all 10 partial or complete fractures, no one of them occurring after the age of five months.

5. **Abdominal Atony of Rickets.**—In the treatment of this condition Ewart resorts to general massage, friction, the sand bath and the salt-water bath, electricity, massage of the abdomen, and the elastic abdominal belt. His experience with the belt has been most satisfactory. He ascribes the results obtained to the automatic action of the belt; the lateral support which it affords to the weak abdominal wall and through this to every vessel in the splanchnic area; the resulting improved distribution of blood with immediate correction of the apparent oligemia, which is one of the features of it; and, above all, the more effective respiration which quickly corrects the pallor.

6. **Treatment of Tuberculous Abscess.**—Starr's plan is to incise the abscess freely, evacuate its contents, wipe off the wall with 10 per cent. iodoform gauze aided by the curette, clean the cavity as perfectly as possible, using gauze freely to wipe out all débris. The wound is closed with sutures placed as deeply as possible to approximate wide areas of tissue. Pressure is kept up over the abscess to prevent its filling with serum and a firm antiseptic dressing is applied. The result in the majority of cases has been excellent. In only 7 cases was there any breaking down of the wound and a resulting sinus. Starr has abandoned the use of iodoform emulsion on account of the dehydrating action of the glycerin. In 48 of his cases the cavity has remained perfectly closed and aseptic for periods varying from four months to six years. Only 5 of the series of 55 cases required a second evacuation of contents, and one a third.

7. **Rheumatism in Children.**—Of 23 cases seen in private practice by Blackader, 5 afterward developed a tonsillitis, which he regarded as rheumatic in character; 1 a chorea with endocarditis, and 1 an erythema nodosum. Three he associated with a disturbed condition of the digestive tract; 7 he regarded as due to overfatigue of the muscles, and 3 presented evidence of trauma.

8. **Prevention of Acute Intestinal Diseases.**—Education, according to Kerley, is the only means of preventing the acute intestinal disturbances of infants. The mother must be taught how to live, how to care for the baby, how to clothe him and bathe him during the summer. It must be impressed on her that he needs all the fresh air available. She must be educated to the point of knowing what to do when the first sign of intestinal disease threatens. Municipalities, farmers and physicians must be educated so that each may be able to aid in preventing these disturbances.

9. **Dietetic Treatment of Enterocolitis.**—According to Morse, the object to be aimed at in the dietetic treatment of enterocolitis is such an arrangement of the food as will starve the bacteria without starving the baby. The food should be withdrawn for as long a time as the infant can bear starvation, plenty of water being given in the meantime. In choosing a substitute for milk, the attempt should be made to select, if possible, a food on which the bacteria which cause the disease grow with difficulty. Morse uses whey and pasteurized buttermilk. All food given should be very much diluted. It is better to begin with whey mixtures, peptonized mixtures or barley mixtures than with straight modifications. The mixtures must never be highly alcoholized, as this tends to throw the work of digestion off of the stomach on to the intestine.

10. **Medicinal Treatment of Enterocolitis.**—LaFetra advises elimination, through the skin by means of warm baths or sponging, and through the bowel by means of copious, high-colon irrigations with alkaline saline solution; atropin 1/1000 of a grain, every two hours, hypodermically, until physiologic action is obtained; hydrochloric acid; pancreatic extract, and tincture of nux vomica or tannate of quinin for stimulation. Chalk, magnesia, zinc oxid or bismuth are valuable to soothe the inflamed intestinal mucous membrane. Opium in the form of Dover's powder or paregoric may also have to be resorted to in severe cases.

11. **Absorption of Fats in Infants.**—Shaw and Gilday found that about 4 per cent. in nurslings and 5 per cent. in bottle-fed infants of the fat ingested appears in the feces. The fat found in the feces is, to a great extent, fat that has escaped digestion. The fatty compounds in the feces exist as neutral fat, fatty acids and soaps. The fatty acids are usually in excess of the other two constituents. The soaps are relatively increased in artificially-fed infants, in infants with a low percentage of fat in the food, and in infants with diarrhea.

15. **Pyloric Hypertrophy.**—Putnam reports the case of a male infant, three weeks old, in whom the pyloric orifice was dilated with a uterine dilator until it was large enough to admit freely a sound of size French 20. The marked success in this case inclines Putnam to the belief that forceps dilatation with breaking through of the tough tissues may be the best routine way of operating.

The Lancet, London.

October 13.

17 Infective Endocarditis Involving the Pulmonary Valves and Associated with Imperfection of the Interauricular Septum. T. W. Griffith.
18 King's College Hospital—A Retrospect. T. P. Teale.

19. *Contribution to the Pathology of Chorea. F. J. Poynton and G. M. Holmes.
20. The Type in School Books and College Text-books. R. T. Williamson.
21. *Agoraphobia—A Remedy. C. Mercier.
22. *Cerebral Tumor, Giving Rise to Jacksonian Epilepsy and, at a Later Stage, Coma. J. A. C. Macewen.
23. *Prevention of Cancer Regarded as a Practical Question Ripe for Solution. C. B. Keetley.
24. The Workmen's Compensation Bill. A. Benthall.

19. **Pathology of Chorea.**—Poynton and Holmes report 3 additional cases in which a diplococcus was found in the pia mater in cases of chorea that proved fatal. In addition, this organism was demonstrated in the brains in these cases lying in the perivascular spaces and connective tissue. As the result of their study the authors conclude that chorea is a manifestation of acute rheumatism, and that the demonstration of diplococci in each of the three cases is a striking confirmation of the assertion that the *Diplococcus rheumaticus* is the infective agent in acute rheumatism.

21. **Agoraphobia.**—Mercier reports one case which was improved somewhat under ordinary remedies, but was cured finally by a sudden severe shock caused by the elopement of the patient's daughter.

22. **Cerebral Tumor.**—In the case reported by Macewen two granulomata, probably syphilitic, were removed from the left motor area of the brain, involving principally the leg and arm centers. Seven weeks after the operation the patient was in good health, and was bright and intelligent, although he sometimes found difficulty in expressing himself, particularly when excited. The right arm and leg were still deficient in power. The patient had no more fits after the operation.

23. **Prevention of Cancer.**—Keetley lays down the following rules for the prevention of cancer: 1. Sterilize the food. The majority of cancers attack the alimentary canal, and especially the parts where food and feces tarry. 2. The sufficient and regular toilet and protection of the nipples and of the genitalia. It is significant that these organs are especially often polluted by stale secretions and discharges, and are more frequently handled by their owners than any other part of the person usually covered by clothing. 3. Due care of the mouth and teeth. 4. The dressings of discharging malignant sores and tumors should be cured, and especially not to pollute either the fingers or the underlinen. 5. Non-malignant sores and tumors should be cured, and especially not allowed to drift on if chronic. 6. Cancerous and doubtful tumors and ulcers should be excised promptly. 7. Abstinence should be practiced from alcohol, tobacco, and from foods which leave waste products, of which the kidneys, the bowels and the skin can not easily and thoroughly get rid and which thereby provoke and sustain the chronic inflammations and ulcers which so often pave the way for cancer. 8. Physical familiarity should be avoided, except with those who are nearest and dearest to us. 9. Much thought should be given, especially by mistresses and housekeepers, to the service as well as to the cooking of food, with a view to disease prevention. Special attention should be paid to the sterilization of milk and its products, cheese and butter.

Journal of Tropical Medicine, London.

October 1.

25. *Nile Boils. F. C. Madden.
26. Three Cases of Infection with Schistosoma Japonicum in Chinese Subjects. O. T. Logan.
27. Hemogregarine of Mammals (H. Balfouri), and Some Notes on Rats. J. B. Cleland.

25. **Nile Boils.**—Under this term Madden describes a particular form of boil peculiar to Egypt which is characterized by the intensity of its inflammation, its extraordinary and early tenderness and pain out of all proportion to its naked eye appearances, its characteristic slough and very scanty serous discharge, its rounded button of hard induration, and its resistance to treatment until it has run its own course.

Journal of the Royal Army Medical Corps, London.

September.

28. Note on the Bacteriology of a Series of Cases of Sore Throat. J. G. McNaught.
29. The Griffith Water Sterilizer. R. H. Firth.
30. Heat as a Means of Purifying Water. P. G. Griffith.
31. Enteric Fever; Is It Invariably a Water-Borne Disease? R. H. Quill.
32. South African Stock Diseases. D. Bruce.
33. Prevalence of Mediterranean Fever Among British Troops in Malta, 1905. (Continued.) A. M. Davies.
34. *Continental Surgical Procedure. F. F. Carroll.
35. The Humor of Indian Sanitation. R. H. Forman.
36. Hints Regarding the Management and Use of X-Ray Apparatus. F. Bruce.
37. *Treatment of Enteric Fever with Typhoid Vaccine. C. Birt.

October.

38. Prevalence of Mediterranean Fever Among British Troops in Malta, 1905. (Concluded.) A. M. Davies.
39. *Phagocytosis of Typhoid Bacteria. W. S. Harrison.
40. Valvular Diseases of the Heart in British Troops, Native Troops, and Prisoners in India, in the Five Years 1895-1899, and in 1902 and 1903. R. R. H. Moore.
41. Incontinence of Urine in the Soldier. S. G. Allen.
42. Kala-Azar. C. Birt and H. R. Bateman.
43. History and Prevalence of Diphtheria in the British Army. F. Smith.
44. *Causation and Prevention of the Spread of Yellow Fever. F. M. Mangin.
45. *Action of Cold or Lukewarm Tea on Bacillus Typhosus. J. G. McNaught.
46. Disposal of the Wounded of Mounted Troops. H. Hathaway.
47. Defects of the Present System of Respiratory Training for the Soldier, with Hints Toward Its Improvement. R. F. E. Austin.
48. Hints Regarding the Management and Use of *X*-ray Apparatus. F. Bruce.

34. **Continental Surgical Procedure.**—In this article Carroll describes the Mosetig-Moorhof method of filling bone cavities with iodoform wax, and the Bier method of employing hyperemia in the treatment of surgical diseases.

37. **Treatment of Enteric Fever with Typhoid Vaccine.**—Birt suggests that 0.02 c.c., or 10,000,000 typhoid bacilli, should be the dose employed for therapeutic inoculation. The amount should be gauged in each case so as to produce as few constitutional and local symptoms as possible. The blood changes which arise after inoculations should be studied by means of opsonic index determination, if possible; but by keeping the daily dose below the limit at which a reaction begins to appear no evil will result from a lack of knowledge of the actual blood condition. The site of the injection should vary; no part should be twice inoculated. Early treatment is insisted on before gross lesions have set in. No cases are reported.

39. **Phagocytosis of Typhoid Bacteria.**—Harrison found that the phagocytes are inactive toward typhoid bacilli, except in the presence of serum, and that normal blood depends for its phagocytic activity toward typhoid bacilli chiefly on an opsonin which differs from the opsonins for staphylococcus in being thermostable. He thinks that in immune blood the phagocytosis of the typhoid bacillus is chiefly encouraged by a thermostabile substance which acts not as an opsonin, but probably by stimulating the white cells.

44. **Yellow Fever.**—Mangin emphasizes the importance of early segregation of every suspicious case of fever, the protection of the patient from the bites of the specific mosquito, and the destruction of infected insects.

45. **Action of Tea on Typhoid Bacillus.**—As the result of an investigation of the action of cold tea on the typhoid bacillus, McNaught found that after four hours' contact the organism diminished greatly in numbers, and that after 20 hours it could not be recovered from cold tea. The tea was prepared by pouring about one liter of boiling water on three heaped-up teaspoonfuls of tea. The tea was allowed to infuse for 10 minutes. McNaught suggests that cold tea may be used as a substitute for water in soldier's water bottles on active service.

Annales de l'Institut Pasteur, Paris.

Last indexed, page 971.

49. (XX, No. 8.) *Origine intestinale de la tuberculose pulmonaire et mécanisme de l'infection tuberculeuse. A. Calmette and C. Guerin (Lille).
50. Etudes sur la morve expérimentale du cobaye (glanders in guinea-pig). Nicolle. (Continued).
51. Études sur les trypanosomiases de Berbérie en 1905. E. and Et. Sergent.
52. Action du radium sur le virus rabique. G. Tizzoni and A. Bongiovanni. See abstract on page 547.
53. (No. 9.) Sensibilité des ruminants et des singes au trypanosome de la dourine (susceptibility of ruminants and monkeys). F. Mesnil and J. Rouget.
54. *Le microbe de la coqueluche (of whooping cough). J. Bordet and O. Gengou (Brussels).
55. Epithélioma contagieux des oiseaux (of birds). E. Burnet.
56. Des relations de la fièvre tropicale avec la quarte et la tierce, d'après des observations prises au Sénégal. Thiroux.
57. Etude des corps intra-épithéliaux de Guarnieri. H. Aldershoff and C. M. Broers (Utrecht).

49. **Intestinal Origin of Pulmonary Tuberculosis.**—In this third communication Calmette states emphatically that any errors due to accidental inhalation of the microbes or insoluble particles were most scrupulously guarded against. His technic has been reviewed editorially in THE JOURNAL, Oct. 6, 1906, page 1100. The animals were fed once with virulent tubercle bacilli, and the bacilli were refound in the lungs as early as the twenty-fourth hour in the adult animals, but not until the fifth day in the younger ones. The bacilli pass through the intercellular spaces in the intestinal epithelium without leaving a trace of their passage. As soon as they enter the chyle vessels they are incorporated by leucocytes and these transport them to the regional lymph nodes, where they are retained a longer or shorter time in proportion to the youth of the animal. In the very young animals they accumulate in the cortical layer of the lymph node, and, if the amount of bacilli ingested was not very large, they remain there and produce tuberculous lesions. If only a small amount of bacilli are ingested, the lymph nodes retain them, increase in size and allow a few—still incorporated in the leucocytes—to escape into the thoracic duct, and finally the nodes subside to normal size again. Inoculation of these glands in guinea-pigs shows that for a few months they still contain a small number of bacilli. If a considerable quantity of bacilli are ingested, small translucid tubercles appear throughout the lungs, but especially at the apices, on the anterior margins, and the pleural aspect, resembling in every respect fresh glanders tubercles in the horse. After a calf has had the single infecting meal he reacts to tuberculin by the twenty-fifth to the thirtieth day. The tuberculous lesions are then established, but, as a rule, they gradually heal, and after three or four months the tuberculin reaction no longer occurs and inoculation of the fibrous subpleural cicatricial tissue in the small cicatrices left no longer infects a guinea-pig. In adult animals there is no reaction on the part of the regional lymph nodes and the pulmonary lesions become established at once. Calmette is convinced that in the immense majority of cases, with the exception only of those in which bacilli were inhaled directly on some pre-existing lesion of the larynx or trachea, the pleural and pulmonary localizations of tuberculosis result from the arrest in the capillaries of the lungs or pleura of microphagic leucocytes immobilized by the toxic secretions of the bacilli which they have taken up. The same can probably be said also of all the localizations of tuberculosis in the bones, joints, meninges, etc. Glandular tuberculosis, he adds, is of intestinal origin. Its frequency in the young is explained by the special histologic characteristics of the lymphatics at this age. Animals healing spontaneously, so that they cease to react to tuberculin after a few months, are no longer susceptible to infection, and can tolerate ingestion of comparatively large amounts of tubercle bacilli, at least for a certain period. They are thus vaccinated. On the other hand, animals given a second and third infecting meal, before they have entirely recovered from the first infection, never become cured. Their lesions continue always a progressive course. This explains why men and animals so often present entirely healed tuberculous lesions. They became infected, with tuberculosis and had time to have their lesions heal before a second infection occurred, and thus they became vaccinated. Research on this aspect of vaccination is now in progress.

54. **The Microbe of Whooping Cough.**—Bordet and Gengou give an illustrated description of the microbe which they have discovered in whooping cough and to which they ascribe specific etiologic importance. It is not agglutinated by serum from persons who have never had whooping cough or who had it many years before, while it is always agglutinated by serum from children convalescing from whooping cough. Another argument is the intensity in this serum of the sensitizing power, manifested by the fixation of the alexin. In the absence of the whooping cough bacilli, the serum leaves the alexin entirely free. Experiments in the line of an effectual serum treatment or active immunization are now under way.

Bulletin de l'Académie de Médecine, Paris.

Last indexed, page 812.

58 (Year LXX, No. 32.) *La syphilis des honnêtes femmes (wives infected by their husbands). A. Fournier.

59 *Pathogénie et prophylaxie actuelles du paludisme. Kelsch.

58. **Wives Infected with Syphilis by Their Husbands.**—Fournier states that one-fifth of all the syphilitic women whom he has had occasion to treat had been infected by their husbands, and in 218 out of 312 cases by husbands who were syphilitic at the time of their marriage. In 130 out of 151 cases the infection occurred during the first year of married life, and in all but 13, during the first six months. In 142 cases the syphilitic infection in the husband dated in 37 cases from a few weeks to a year; from one to two years in 31, and from two to three years in 30, that is to say, that two-thirds of the men married while they were still in an infecting stage of the disease. Fournier used to believe that three or four years' delay was sufficient to guarantee against infection of the wife, but now he declares that four or five years are necessary, and he says that another quarter century of experience might lead him to lengthen the period still further. In 9 cases the syphilis was transmitted in the second year after the marriage; in 3 in the third year; in 3 in the fourth; in 2 in the fifth; in 3 in the sixth; in 2 in the seventh, and in 1 case each during the eighth and ninth year after marriage. This astonishingly tardy transmission of the disease, he says, confers a new physiognomy on syphilis, demonstrating a tardy secondary syphilis. Recent research has demonstrated that the secondary period is not always restricted to the first three years of the disease, but may develop, with typical secondary symptoms, at the fifth, eighth, tenth, fifteenth or twentieth year, or later still. This tardy secondary syphilis entails tardy secondary contagion if occasion offers.

59. **Pathogenesis and Prophylaxis of Malaria.**—Kelsch does not deny the mosquito theory of the transmission of malarial infection, but he believes that this does not exhaust all the possibilities of transmission of the infection. Experience has too often demonstrated that epidemics of malaria follow extensive turning up of the soil and excessively hot seasons, ingestion of dust-laden food, over exertion, and other faults against hygiene. The distribution of the anopheles, also, does not always correspond to the distribution of malarial foci, and there can be no doubt that the hematozoon finds other ways of access to the body than in mosquito bites. In all his experience with malaria in France he has never known of an instance of the direct transmission of malaria from man to man. Malaria is very prevalent in Madagascar at present, and he ascribes the epidemic to the extensive sanitary works now under way there.

Archiv f. Gynäkologie, Berlin.

Last indexed, page 973.

60 (LXXIX, No. 3.) *Dauererfolge der Ovariotomie (remote results). D. von Velits.

61 *Ueber doppelseitige metastatische Ovarial-Carcinome. M. Stickel.

62 The So-called Causes of Birth.—Die So-gen. Ursachen der Geburt. F. A. Kehrer (Heidelberg).

63 Behandlung des Puerperal-Fiebers mit Paltauf'schem Streptokokken-Serum. O. Burkard.

64 *Ueber die teratoiden Geschwülste des Eierstockes (ovarian tumors). H. Neuhäuser.

60. **Remote Results of Ovariotomy.**—For 15 years von Velits has been making a special study of ovarian tumors, with histologic examination and continued oversight of many of the patients. The total number that came under observation was 149, and operation was performed in 120 cases. He analyzes this material from various standpoints, with illustrations of special features. His experience has shown that cancer in the ovary threatens chiefly the peritoneum. Implantation in the peritoneum can be hastened by increased centrifugal proliferation of the cancer elements with perforation of the tumor wall, or by direct contact of the tumor with the peritoneum when impacted in the pouch of Douglas, or by rupture of a cyst in consequence of torsion of the pedicle, or by flat, inflammatory adhesion, which is the worst of all complications as the cancer grows into the lymphatics in the adhesion membranes. The patient succumbs to the influence of this peritoneal implantation before the cancer has involved the other ovary, the uterus, the broad ligaments or more distant organs. Improvement in the outlook in cases of ovarian cancer can be anticipated in the future only from earlier operations. The absolute and remote proportion of permanent cures in his material was 12.5 per cent. in operations for removal of ovarian cancer. In operations for non-malignant growths the proportion of

permanent cures (after 5 years) is 100 per cent. He found the genuine, solid cancers of the ovary characterized by lesser malignancy than the cystic "papillary" cancers. As these solid cancers generally develop in the comparatively young, the other, sound ovary can be retained without much fear that this conservative treatment will avenge itself by later tumor formation in the retained organ. The tendency to tumor formation in individual cases is unmistakable, and justifies removal of the sound ovary even with non-malignant growths. Years after the removal of an innocent dermoid the other ovary may present a malignant tumor, inoperable when first discovered, as has happened in his experience. Sarcoma in the young is an exception to this rule, as it shows little tendency to develop bilaterally. In one of his cases a pseudo-mucinous cystoma was associated with a large goiter and dermoid cyst. In 5 cases a pseudo-mucinous cystoma was associated with a dermoid cyst.

61. **Bilateral Metastatic Ovarian Carcinomata.**—Stickel reports 13 cases of metastatic carcinoma in both ovaries. In 9 the primary tumor was in the stomach. In another case the primary tumor was in the ascending colon, and in 3 others in the breast. The patients were 26, 30, 36, 41, 44 or 45 years old except 3 who were 52 or 56. Careful examination of the ovaries should be a preliminary to every operation for removal of a primary cancer of the breast, stomach, gall bladder or intestine. They may be found in metastatic degeneration before any infiltrated retroperitoneal glands can be discovered, and while the abdominal cavity otherwise is still free from metastases. In case of bilateral ovarian cancer, the most diligent search should be made for a primary tumor elsewhere. It may be so small that it can not be detected by palpation, and all diagnostic measures should be brought into play to discover whether a primary growth exists elsewhere in the abdomen.

64. **Teratoid Ovarian Tumors.**—Neuhäuser reports 2 new cases and reviews 33 others. Early extirpation has given 26.9 per cent. permanent cures in 26 cases. Nearly 43 per cent. of the patients succumbed to a recurrence within a year, and 19.2 per cent died immediately after the operation. It seems that a pregnancy is liable to arouse a hitherto latent teratoid ovarian tumor to rapid growth. Metastasis occurs by way of implantation as well as through the lymphatics and blood, but experience has shown that existing peritoneal metastases are liable to retrogress spontaneously after the laparotomy. It is impossible to tell whether the tumor is malignant or non-malignant, even with the microscope. It may be extremely malignant without showing either carcinomatous or sarcomatous degeneration.

Berliner klinische Wochenschrift.

65 (XLIII, No. 37.) Zur chirurgischen Behandlung des Magengeschwürs (gastric ulcer). L. R. von R. Rydygier.
66 Die Silber Spirochaete. W. Schulze.
67* Ueber Spirochætenbefunde bei Carcinom und bei Syphilis. H. Friedenthal.
68 Ueber die Pollantintherapie des Heufiebers (of hay fever). C. Zarniko.
69 Die diagnostische Bedeutung hypochondrischer Vorstellungen. Rauschke.
70 (No. 38). Ueber drei mit Serum behandelte Fälle von Tetanus traumaticus. J. Kentzler.
71 Ueber den Wert des Komplementablenkungs-Verfahrens in der bakteriologischen Diagnostik (deviation of complement test). C. Moreschi.
72 Ueber Nystagmus toxicus. Th. Weyl.
73 *Zur Pathologie und Therapie der Gallensteinkrankheit (gallstone disease). L. v. Aldor.
74 Zur Kenntnis des congenitalen Myxödems und der Skelett-Wachstumsverhältnisse bei demselben. P. Argutinsky. (Commenced in No. 37.)
75 (No. 39.) Ordinary Hemorrhages from the Kidneys.—Ueber gewöhnliche Nierenblutungen. Casper.
76 *Ueber die Heilung postoperativer Fisteln der Bauchhöhle durch Vaccine-Behandlung nach dem Wrightschen Prinzip. E. M. Weinstein.
77 Klinisches und Experimentelles über Gastroptose. E. Rosenberg.
78 Conception of Neurasthenia.—Ueber den Begriff der Neurasthenie. T. Dunin.

67. **Spirochetes in Cancer and in Syphilis.**—Friedenthal thinks that too much is being taken for granted in regard to the connection between spirochetes and syphilis. The silver-stained spirochetes are closely simulated by silver-stained scraps of elastic fibers, twisted into spirals by the contracting influence of alcohol, as also by coils of unmedullated nerve tissue. He gives an illustration of deceptive spiral bodies in carcinoma tissue which are merely silver deposited in the form of spiral twists in thickened stretches of protoplasm, without the presence of any parasites.

73. **Treatment of Gallstone Affections.**—In this condition it is not the presence of gallstones that causes the trouble, von Aldor states, but superposed infection. There can be no cholecystitis without infection. Riedel has calculated that there are two million people in Germany sheltering gallstones, but only one-twentieth ever become conscious of their presence. Autopsy frequently reveals gallstones in persons who were never aware of their presence during life. He has also frequently observed cholecystitis heal, or at least pass into a phase of absolute latency, although no stones were evacuated. Körte has recently published reports of some cases in which the clinical picture of cholelithiasis, was accompanied by the typical pathologic findings of infectious cholecystitis and yet no stones could be discovered in any of the cases. He also had bacteriologic examinations made in seventy-five cases in which he operated, with positive findings in every instance. From these facts von Aldor reasons that a gallstone affection is not due to the migration or impaction of a stone, but rather to the development of an infectious process in the gall bladder, which entails secondarily the impaction of the stone or its migration. He has been making a special study of the feces in his gallstone cases during the last few years, and was able to demonstrate objectively the existence of a catarrhal affection of the small or large intestine or of both in more than half the cases. In all there was a history of sluggish action of the bowels or obstinate constipation. On the other hand, he found evidences of acute intestinal catarrh in less than a dozen instances. The gallstone affection was almost invariably more serious in the cases with the severer intestinal disturbances. These facts explain the apparent efficacy of many of the vaunted gallstone remedies. They contain more or less drastic purgatives, and they give unmistakable relief, although they have the drawbacks of all purgatives in catarrh of the intestines, aggravating the condition in time. The more gallstone patients he has occasion to observe, the more he is convinced that systematic and persevering internal treatment will prove successful in many cases heretofore turned over to the surgeon. The only absolute indications for operative treatment which he recognizes are the rare cases of acute choledochitis acompanied by symptoms of severe inflammation of the gall bladder, and in acute and chronic empyema of the gall bladder. As relative indications he regards the cases of chronically recurring cholecystitis and chronic choledochitis which have proved refractory to months of Carlsbad treatment with repose, also dropsy of the gall bladder causing the patient much disturbance, and, finally, circumstances which forbid the patient's giving up the time to a Carlsbad "cure." The most grateful field for internal treatment is chronic choledochitis without repeated chills and remittent fever, but it requires the greatest patience. A cure is seldom realized in less than 4 or 5 months, but it is possible to avoid an operation by this time. If the patient is under constant medical supervision, the development of serious complications need scarcely be feared. In one case Kehr operated successfully, although the choledochitis had lasted for 12 years. The main point in internal treatment is repose, and this must be absolute until the last trace of the cholecystitis has completely retrogressed. This may occur sometimes in 4 or 5 weeks, in other cases not until after 8 or 10 weeks or still longer. After all traces of swelling of the gall bladder and of the slightest tenderness have vanished, he orders much exercise and copious drinking of Carlsbad water, kept up for a year. Whether to take this Carlsbad "cure" at home or at Carlsbad or elsewhere depends on the patient's circumstances. The efficacy of the water is probably due to its anti-catarrhal action.

76. **Treatment of Postoperative Fistula by Vaccines According to Wright's Principle.**—Weinstein has been treating at Landau's clinic a number of cases of fistulæ after laparotomies by applying Wright's method of vaccine production with the patient's own individual bacteria from the fistula. In the first three cases the infection was found to be the work of streptococci and in the fourth of streptococci plus the colon bacillus. The operation had been done on account of tuberculous lesions in the last three patients. The first two patients are entirely

healed; the third is nearly healed, but the fecal fistula in the fourth case still persists unhealed, owing to constantly renewed infection. His findings confirm those of Wright in every particular.

Deutsche medizinische Wochenschrift, Berlin and Leipsic.

79 (XXXII, No. 38.) *Laryngotomy in Radical Treatment of Laryngeal Cancer.—Ueber die Radikalop. des Kehlkopfkrebses mittels Kehlkopfspaltung. H. von Bruns (Tübingen).
80 Ueber Neurasthenie und ihre klimatische und balneotherap. Behandlung. E. Romberg (Ib.)
81* Ueber vasomotorische Krampfzustände bei echter Angina pectoris (cramps in peripheral vessels). H. Curschmann (Ib.)
82* Zur Funktionsprüfung der Arterien (functional tests of separate arteries). P. Müller (Ib.) (Continued.)
83 *Ueber den Kampf wider das Uterus-Carcinom. Döderlein (Ib.)
84 *To Reduce Size of Ovarian Tumors to Aid in Excision.—Ist die Verkleinerung der Ov.-Tumoren zwecks operative Entfernung zulässig? O. Sarwey (Ib.)
85* Lumbal-Anästhesie in der Gynäkologie und Geburtshilfe (and in obstetrics). K. Baisch (Ib.)
86 Ueber die primären tuberculösen Uveal-Erkrankungen. G. Schleich (Ib.)
87 Fall von Pancreas-Fistel nach operierter Pancreatitis hæmorrhagica. W. Schmidt (Stuttgart).
88 Mercury in the Body.—Vorkommen von metallischem Quecksilber im menschlichen Körper. (Id.)

79. Incision of Larynx in Treatment of Laryngeal Cancer.—A surprisingly large proportion of patients with laryngeal cancer are being cured now by the modern radical operation, von Bruns asserts. This progress is not due so much to improved technic as to the improvement in early diagnosing, selection of methods, etc. He adds that the sad fate of the second German emperor stimulated laryngologists and surgeons all over the world to a closer study of laryngeal cancer. The various important points that have been learned are reviewed. Partial removal of the larynx is now generally preferred to total, and incision of the larynx (thyrotomy), as a preliminary to excision of the cancer, is constantly finding new advocates. Bruns has done thyrotomy in 10 cases of laryngeal cancer, and reports 7 recoveries of from 2 to 15 years' duration without a death. Thyrotomy is indicated only in the early stages of internal laryngeal cancer. The voice is altered so little by it that two of his patients, who were teachers, were able to continue teaching. Out of 114 cases reported since 1890, the mortality was 9 per cent., with 22 per cent. recurrences, while in 48 per cent. the patients were cured for at least a year. He concludes with a description of the technic and a denunciation of exclusively endolaryngeal operations for laryngeal cancer.

81. Spasmodic Vasomotor Contraction with True Angina Pectoris.—Curschmann declares that far too little attention has been paid to the underlying or accompanying angina pectoris in cases of peripheral vasomotor cramps. He describes four cases in detail in which the assumption of underlying angina pectoris was confirmed by the course of the cases or autopsy findings. In a fifth case the trouble was of exclusively nervous origin, a purely nervous vasomotor angina pectoris, as Nothnagel described it. Curschmann's four cases show that the entire clinical picture of the latter can develop on the basis of, or as an accompaniment to true angina pectoris. One patient had chronic cardiac insufficiency, true angina pectoris, and angioneurotic vascular cramps in arms, feet and face, with incipient nephritis. The second had chronic insufficiency of the heart, sclerosis of the coronaries, and peripheral vasomotor neurotic disturbances in hands, brain and face, with arthritis. In the third case there was aneurism of the ascending aorta plus angina pectoris, with attacks of amaurosis on the right side.

82. Functional Tests of Arteries.—Müller comments on the way in which the idea is gaining ground that the circulation, in its various parts, is possessed of independent functional capacity. Study of each part separately is liable to afford instructive information, as he shows by specific examples. The reaction induced in the vascular wall under various stimuli, cold, heat, etc., is best studied with the plethysmograph; the findings are not absolutely exact, but they reveal whether the arteries have normal elasticity or not, and whether it is above or below normal. He has been making hundreds of tests on various persons. The principal tests were the application of a smooth piece of ice, 6x10 cm., to the bicipital groove. This brought the ice close to the brachial artery. The heat reflex was elicited by sending hot water through a rubber tube wound around the entire upper arm. The thermometer should show that the heat at the arm reaches 40 C., no higher. This is ensured by sending 10 liters of water at 50 C. through a medium-sized tube in the course of two minutes. At the end of the second minute water at body temperature is sent through the tube, and the arm thus restored to normal temperature. Repeating these tests on the same person several times gave remarkably concordant findings.

83. Uterine Cancer.—Döderlein states that at his clinic in Tübingen the vaginal route has been definitely abandoned.

84. Is It Permissible to Remove Ovarian Tumors in Sections?—Sarwey writes from the same clinic to announce that it is the practice there to reduce the size of an ovarian tumor before attempting to remove it. In 190 cases in which this was done, including 90 verified cystadenomata, no grafting of the tumor occurred in any instance. Experience has shown that the length of the incision is an important factor in the results, and he now operates through a small incision, removing the growth in sections. Vaginal ovariotomy is restricted to cystic and semicystic, small and medium tumors that can be reduced in size and which are uncomplicated, freely movable, and readily accessible from below. A suprapubic transverse incision is suitable also for solid, movable tumors as large as a child's head. Autopsy has shown that cancers, supposed to be result of grafting, always turned out to be primary cancers in the stomach or elsewhere. If the tumor is as large as a man's head or larger, he removes it through the small incision whenever possible, ready to enlarge the incision at need.

85. Spinal Anesthesia in Gynecology and Obstetrics.—Baisch sustains Döderlein in his affirmation that "Bier's invention of spinal anesthesia promises to become the sovereign technic for anesthesia in gynecology." Stovain, novacocain and tropacocain were used indiscriminately in 150 operative cases, including 40 laparotomies of the most serious kind. The original technic has been modified and the scopolamin technic combined with it to avoid certain drawbacks, especially the patients' knowledge of the operation. He insists that the fatalities from respiratory paralysis have all been unquestionably due to overdoses or to gross disregard of indications. The technic of the combined method is simpler than that of ordinary methods, the preliminary subcutaneous injection being made by the nurse, according to Krönig's directions. It seems to be perfectly harmless. Notwithstanding the minute amounts—scopolamin, 0.0006 gm.; morphin, 0.02 gm.; tropacocain, 0.05 gm.; ether, from 5 to 10 gm.—the anesthesia is generally ample for the purpose. This technic is valuable also, he states, in cases of difficult delivery, with or without raising the pelvis.

Monatsschrift f. Geb. u. Gynäkologie, Berlin.

Last indexed, page 1235.

89 (XXIV, No. 3.) Zur Physiologie und Pathologie der Placentation. L. Stolper.
90 *Ueber Gefahren der Pubiotomie und Vorschläge zu deren Verhütung (dangers and means to prevent them). W. Rühl.
91 Bilateral Ankylosis of Hip Joints; Absolute Contracted Pelvis; Severe Nephritis; Supravaginal Amputation at Fifth Month of Pregnancy, Recovery.—Supravaginale Amputation des Uterus gravidus V. mens., etc. A. Sippel.
92 Ueber Plasma- und Decidua-Cellen. K. J. Wederhake.
93 *Simulated Extrauterine Pregnancy.—Ueber vorgetäuschte Extrauterinschwangerschaft, zugleich ein Beitrag zu den Corpus luteum-Blutungen. C. Weinbrenner.
94 *2 in der Landpraxis mit glücklichem Ausgang erfolgte Kaiserschnitte. (Cesarean section in country practice). K. Franz
95 *Spinal Anesthesia for Gynecologic Operations.—Die Medullar Narkose bei gyn. Op. R. Pforte.

90. To Prevent Injury in Pubiotomy.—Rühl advises prophylactic detaching of the bladder wall from the vagina to prevent injury of the bladder in sawing the pubic bone. He makes a small incision in the anterior vault of the vagina, detaches the bladder and pushes it as high up as possible, entirely out of the way of the contemplated operation, holding the organ with a stitch to prevent its lapsing back. This extreme measure is necessary only in case of exceedingly contracted pelvis with preceding inflammation in the small pelvis and very rigid vaginal walls. If a rigid vaginal vault tears as the bones separate, the further extension of the tear may be prevented by vaginoperineal incisions.

93. Simulated Extrauterine Pregnancy.—Weinbrenner relates the details of two cases in which a hemorrhage in a corpus luteum, already in cystic degeneration, burst the walls of the cyst and free hemorrhage into the abdominal cavity followed. In one instance the hyperemia was still further enhanced by

torsion of the pedicle of a cystic ovary. The clinical diagnosis in each case was tubal pregnancy, but the microscope excluded the possibility of a pregnancy.

94. **Cesarean Section in Country Practice.**—Franz reports 2 cases in which Cesarean section was performed under extremely unfavorable conditions but with favorable outcome for both mother and child in each instance. The instruments, etc., were sterilized at the physician's home, and the aseptic operation was performed with the aid of two other physicians, one taking charge of the anesthetic. The principal factor in this favorable result is assumed to be the fact that the birth passages were left undisturbed, and thus there was no fear of imported infection.

95. **Spinal Anesthesia for Gynecologic Operations.**—Pforte reports 50 abdominal and 50 vaginal operations performed under spinal anesthesia at Königsberg. The verdict is favorable. He says that the technic is most excellent for all operations that do not involve the peritoneum, and, even with laparotomies it reduces the amount of chloroform necessary, and eliminates postoperative shock.

Münchener medizinische Wochenschrift.

96 (LIII, No. 31.) *Retention of Sphincter in Removal of Rectal Cancer.—Zur Frage der Erhaltung des Schliessmuskels bei der Exstirpation des Mastdarmkrebses. P. Poppert.
97 Ueber proteolytische Ferment-Wirkungen der Leukozyten. E. Muller and G. Jochmann.
98 Ueber 2 Fälle von zerebraler Hemiplegie im Kindesalter (in children). H. Wichern.
99 *Ein neuer Apparat zur Hyperämie-Behandlung des Kopfes (to induce hyperemia of head). V. Schmieden.
100 Ueber eine bessere Darstellungsart der Spirochæta pallida im Ausstrich (improved smear technic). E. Hoffmann and A. Halle.
101 Gymnastic Treatment of Joint Contracture by General Practitioner.—Wie kann der praktische Arzt die gymnastische Behandlung der Gelenkkontrakturen durchführen? G. Hohmann.
102 Ueber Verlagerung der Trachea bei intrathorazischen Erkrankungen (displacement of trachea). A. Grober.
103 Ueber die Verwendung von Formalin-Lösungen bei der Uhlenhuthschen Blutuntersuchung (technic of biologic blood test). H. Merkel.
104 *Practical Application of Continuous Temperature Register.—Ueber die praktische Verwertung der Dauermessung. E. Oertmann (Wurzen).
105 Die Ortho-Kystoskopie. J. Weinberg.
106 Plastische Röntgen-Bilder. A. E. Stein.
107 *Leaflet to Give to Mothers.—Eine neue Merktafel für Mütter. H. Rosenhaupt.
108 (No. 32.) Zur Frage der teleangiektatischen Granulome. H. Bennecke.
109 *Acute Dilatation of the Stomach and the So-called Arteriomesenteric Intestinal Occlusion.—Ueber akute Magenerweiterung und sogenannten arterio-mesenterialen Darmverschluss. Neck.
110 Behandlung akuter Arthritiden mit intravenösen Kollargol Injektionen. G. Riebold.
111 Zur Behandlung hysterischer Kontrakturen der unteren Extremitäten durch Lumbal-Anästhesie. H. Lohrer.
112 *Neuroses of the Heart and Exophthalmic Goiter.—Herzneurosen und Basedow. M. Fischer.
113 4 Fälle von Epithel-Zysten. L. Klein.
114 Behavior of Typhoid Bacilli in Blood in Respect to Its Bactericidal Action.—Ueber das Verhalten der im Blute der Typhuskranken nachweisbaren Typhusbazillen gegenüber der bakteriziden Wirkung des Blutes. A. Lemierre.
115 Improved Appliance for Suction Therapy.—Ein einfacher und praktischer Apparat für die Biersche Stauung. O. Muck.
116 Die Behandlung der Stiele bei gynäkologischen Operationen (treatment of stumps). L. v. Stubenrauch.
117 (No. 33.) Discussion of Anesthetics.—Die modernen Bestrebungen zur Verminderung der Narkosengefahr. W. Wendel.
118 Die Prognose und Therapie der Cholelithiasis im Lichte der Statistik und Erfahrung. A. Ritter.
119* Der Nachweis des Toxins in dem Blute des Diphtherie-Kranken (toxins in blood). A. Uffenheimer.
120 *Typhoid Bacilli Carriers in an Insane Asylum.—Ueber bemerkenswerte Befunde bei Untersuchungen auf das Vorhandensein von Typhusbazillenträgern in einer Irrenanstalt. A. Nieter and H. Liefmann.
121 Ueber Antagonismus zwischen normalen und immunen bakteriziden Sera. S. Korschun.
122 *Ueber die Beziehungen der Tetanie zum weiblichen Sexualapparat. E. Gross.
123 Silver Acetate to Prevent Ophthalmia Neonatorum.—Ueber die Prophylaxe der Blennorrhoe der Neugeborenen. Thies.
124 Prurigo Following Intestinal Catarrh.—Zur Etiologie der Prurigo. L. Steiner and H. Vorner.

96. **Retention of Sphincter Muscle in Removal of Rectal Cancer.** Poppert analyzes the literature on this subject, the results compelling him to warn decidedly against sacrificing the sphincter if it can possibly be saved. He reports 17 patients out of 60 permanently cured by resection of a rectal cancer. One patient has had no signs of recurrence during 15 years, and others for 9, 7, etc., to date. Among these cured cases are 8 treated by amputation and 9 by resection. These results proclaim that resection need not be abandoned for amputation. He prefers resection with circular suture of the intestine according to Kraske, without disturbing the sphincter muscle. Other methods are much less certain. The more thorough the preparation, the more cautious and sparing the use of the knife, the more frequently will we be able to cure the patient without burdening him with distressing incontinence.

99. **Apparatus to Induce Hyperemia in the Head.**—Schmieden gives an illustrated description of a glass bell that fits air-tight over head and neck and allows the application of the Bier technic.

104. **Permanent Temperature Record.**—Oertmann presents a maximal thermometer made on the principle of a hemorrhoid pessary, and another combined with a uterine pessary, and one to fasten continuously in the axilla. By this means it is possible to learn the temperature of the body at all times of the day, not merely on a casual, brief examination.

107. **Leaflet to Give to Young Mothers.**—Twelve rules are given on the leaflet, the first four urging the mother to nurse the child and presenting as one argument the conclusions of von Bollinger's investigations, which showed that women who had not nursed their children were more frequently affected with mammary cancer than those who had. Another of the rules states that the mother must not attribute any sickness of the child to its teething. ". . . there is no sickness that comes from teething; if the child is sick, it can be only because it is ailing from some other cause while it is teething." He agrees with Kassowitz that altogether too much etiologic importance is ascribed to teething.

109. **Acute Dilatation of the Stomach.**—Neck remarks that it is of the utmost importance that this condition should be recognized early, as it is generally easily remedied by appropriate treatment, while liable to prove fatal without it. The correct diagnosis was made in only 13 out of 60 cases on record, he says, and then almost always by physicians who had lost patients with similar symptoms and who had been enlightened as to their cause by the autopsy. As a rule, the first symptom is sudden, violent vomiting, accompanied by more or less intense pain in various parts of the distended abdomen. The pulse is small and rapid, but the temperature is normal. The absence of high temperature allows peritonitis to be excluded, as this is usually accompanied by fever. In other respects the symptoms suggest peritonitis, and the peritoneum is liable to become inflamed secondarily. Another differentiating point is an encapsulated collection of fluid in the left side of the abdomen. The stomach tube affords the most reliable information, and evacuation of the contents of the stomach through it is the most important measure in treatment. The pelvis should be raised while the stomach is being emptied and the organ should be rinsed out systematically several times a day at first. It is important to be sure that the stomach sound reaches down into the fluid. In some of the cases that proved fatal after the stomach had been rinsed several times, this result was probably due to the fact that the sound had failed to evacuate all the fluid. No food should be taken by the mouth until the stomach has entirely recuperated. The prognosis is grave unless proper treatment is instituted at once. Out of the 64 cases known, 47 proved fatal. In one of Neck's 4 cases the acute dilatation followed overloading the stomach with fresh fruit; the patient was a young man of 16. In 2 others there was a tendency to kyphoscoliosis since youth, which he thinks had induced a predisposition to ptosis or dilatation of the stomach on slight provocation. In 29 of the total cases on record the acute dilatation of the stomach followed chloroform anesthesia, and in 11 of these cases the operation had not involved the abdomen but was at points remote from it. It is evident that the chloroform must have entered the stomach and injured the muscular and nervous elements so seriously that acute dilatation was the result. It may occur in a stomach apparently entirely healthy, and in robust persons, although in most cases there was some predisposing factor such as debility after an illness, a stomach affection or downward displacement.

112. **Cardiac Neuroses and Exophthalmic Goiter.**—Fischer asserts that exophthalmic goiter occurs much more frequently than is generally recognized, especially the form in which the

exophthalmos and the enlargement of the thyroid are not pronounced enough to attract attention. The affection is generally diagnosed as "neurasthenia," "anemia," or "cardiac neurosis," but is refractory to all the measures ordinarily successful on this diagnosis. The patients are generally women with some disturbance in the genital sphere, either puberty or the menopause, metrorrhagia or amenorrhea. The connection between the thyroid gland and processes in the uterus has long been known. Osteomalacia has recently been attributed to hyperfunctioning of the thyroid. The patients sometimes have gastrointestinal disturbances, attacks of vomiting, diarrhea for months, and the like. Their chief concern, however, is in regard to the heart, whose disturbing or painful palpitations distress them and may induce dyspnea and syncopal conditions. The objective findings range from simple acceleration of the pulse to extensive dilatation of the heart and whistling murmurs. All the patients complain that they are out of order; they feel uncertain, not sure of themselves, sometimes as if they were living in a dream, and all agree that the attacks come on with the greatest irregularity and without appreciable cause. There is no history of nervous antecedents. If in such cases the symptoms persist under internal treatment, and if there is suspicion of enlargement of the thyroid, treatment should be addressed to the thyroid. It is not necessary to call the patient's attention to this blemish, merely prescribing ostensibly for the cardiac neurosis. As a rule it will be found that the gland has always been rather large since youth. Two or three weeks of treatment addressed to neutralizing the toxins elaborated by the thyroid gland produced remarkable improvement in four cases in his experience in the last few months. Rest for body and mind is an important adjuvant.

119. **Toxins in Blood in Diphtheria.**—Uffenheimer has found a toxin in the blood of diphtheria patients at an early stage, and has found it possible to differentiate the disease, by injection of animals, before the bacteriologic test was positive. He injected only a small amount of the toxin, and accepted as a positive response the palpable infiltration of the subcutaneous cellular tissue without waiting for more prominent signs. When the animals were killed later the signs were so pronounced then as to be unmistakable. Out of 14 cases of diphtheria he found the toxin present in 6, dubious in 4, absent in 4. The repeated finding of the toxin in some of the cases imposes the necessity for prompt neutralization with antitoxin, repeating the injections of antitoxin again and again to neutralize the toxin in the blood as it is formed, and also to draw out from the tissues the toxin already anchored in them and to render it harmless. Dönitz has demonstrated that large amounts of the antitoxin are able to attract out of the tissues the toxin already settled in them, and to neutralize it.

120. **Typhoid Bacilli Carriers in an Insane Asylum.**—Nieter states that typhoid and dysentery have been endemic in the asylum in question for several years. There are about 900 inmates, but most of the cases occurred in a pavilion with 250 inmates. Typhoid bacilli were found in the stools of a patient suffering from acute dysentery. Her serum agglutinated the typhoid bacillus at 1 to 100 and the Flexner dysentery bacillus at 1 to 800. At the autopsy of another patient who had succumbed to chronic dysentery, typhoid bacilli were found in the intestines and in pure culture in the gall bladder, which contained gallstones. Typhoid bacilli were agglutinated at 1 to 50, and Flexner bacilli at 1 to 100. Further research revealed 5 more typhoid bacilli carriers, that is, a total of 7 among the 250 insane inmates of the building. In another insane asylum 2 bacilli carriers were found. In both institutions, after isolation of the discovered bacilli carriers, the disease has ceased to be endemic.

122. **Relations Between Tetany and Sexual Apparatus.**—Gross summarizes what has been written on this subject and relates a case from his own experience in which attacks of tetany could be induced by stimulating the puerperal uterus to contract. The patient was a woman of 39; the uterus had been curetted after abortion at the fifth week. In 2 other cases the attacks of tetany occurred during a pregnancy. In both these cases, and in some others in the literature, the coincidence of bilateral incipient cataract is mentioned.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

DISEASES OF WOMEN. A Handbook for Students and Practitioners. By J. Bland-Sutton, F.R.C.S., Surgeon to the Middlesex Hospital, and Senior Surgeon to the Chelsea Hospital for Women, and A. E. Giles, B.Sc., F.R.C.S., Surgeon to the Chelsea Hospital for Women and Gynecologist to the Tottenham Hospital. Fifth edition, with 129 illustrations. Cloth. Pp. 536. Price, $3.25. New York: Rebman Company, 1906.

ENTERIC FEVER IN INDIA, and in Other Tropical and Sub-Tropical Regions. A Study in Epidemiology and Military Hygiene. By E. Roberts, M.B., D.P.H., Formerly Deputy Sanitary Commissioner, Northwest Provinces; lately Statistical Officer to the Government of India in the Medical and Sanitary Departments, etc. Cloth. Pp. 571. Price, 21s. net. London: Bailliere, Tindall and Cox, 1906.

A TEXT-BOOK OF ELEMENTARY ANALYTICAL CHEMISTRY, Qualitative and Volumetric. By J. H. Long, M.S., Sc.D., Professor of Chemistry and Director of the Chemical Laboratories in the Northwestern University Medical School. Third edition, revised and enlarged. Cloth. Pp. 299. Price, $1.25 net. Philadelphia: P. Blakiston's Son & Co., 1906.

UEBER EIN ZUVERLASSIGES HEILVERFAHREN BEI DER ASIATISCHEN CHOLERA SOWIE BEI SCHWEREN INFEKTIÖSEN BRECHDURCHFALLEN und ueber die Bedeutung des Bolus (Kaolins) bei der Behandlung gewisser Bakterienkrankheiten von Dr. Julius Stumpf. Mit 1 Tafel. Paper. Pp. 62. Price, 1.90 mk. Würzburg, Germany: A. Stuber's Verlag, 1906.

STÖHR'S HISTOLOGY, Arranged on an Embryologic Basis. By F. T. Lewis, Assistant Professor of Embryology at the Harvard Medical School. From the Twelfth German edition, by P. Stöhr. Sixth American Edition, with 450 illustrations. Cloth. Pp. 434. Price, $3.00 net. Philadelphia: P. Blakiston's Son & Co., 1906.

TREATMENT OF SYPHILIS. By A. Fournier, Professor at the Faculty of Medicine, Member of the Academy of Medicine, Physician to the St. Louis Hospital, Paris, English Translation, second edition revised and enlarged by C. F. Marshall, M.D. Cloth. Pp. 528. Price, $5.00. New York: Rebman Company, 1906.

ELEMENTARY MANUAL OF REGIONAL TOPOGRAPHICAL DERMATOLOGY. By R. Sabouraud, Director of the City of Paris Dermatological Laboratory, St. Louis Hospital. English Translation by C. F. Marshall. Cloth. Pp. 570. Price, $5.00. New York: Rebman Company, 1906.

TRANSACTIONS OF THE NEW HAMPSHIRE MEDICAL SOCIETY, at the One Hundred and Fifteenth Anniversary held at Concord, May 17-18, 1906. Cloth. Pp. 256. Concord, N. H.: Ira C. Evans, Printer, 1906.

THE FACE, HAIR AND SCALP, Their Care and Treatment, also Facial and Scalp Massage. By Carl Rosen. Cloth. Pp. 158. Price, $1.00. Chicago: Monarch Book Company.

CONFERENCES OF THE MORAL PHILOSOPHY OF MEDICINE. Prepared by An American Physician. Cloth. Pp. 368. Price, $1.50. New York: Rebman Company, 1906.

GREEN'S ENCYCLOPEDIA AND DICTIONARY OF MEDICINE AND SURGERY. Vol. II. Bre-Ear. Cloth. Pp. 528. London: William Green & Sons.

NEW PATENTS.

Recently granted patents of interest to physicians:

831592. Gynecologic appliance. Joseph H. Ballard, Vancouver, B. C.
831711. Massage device. B. S. Dean, Philadelphia.
831873. Apparatus for purifying natural water. Frank Julian, St. Paul, Minn.
831726. Device for rolling bandages. Louis Long, Buchanan, N. Y.
831728. Anesthetic holding and dispensing apparatus. James R. Maxfield and S. B. Maupin, Grand Saline, Kan.
831733. Sleeping bag. Henry E. Moore, Brookline, Mass.
831623. Inhaler. Frank B. Murphy, Logansport, Ind.
831812. Pasteurizing. Henry E. Weber, Canton, Ohio.
831813. Pasteurizing apparatus. Henry E. Weber, Canton, Ohio.
832032. Stethoscope. C. R. C. Borden, Brookline, Mass.
832201. Dilator. Samuel L. Kistler, Los Angeles, Cal.
832346. Invalid bed support. Eva S. Stewart, Port Arthur, Ont., Canada.
832517. Device for lifting invalids. George B. Wilt, Marion, Ind.
833120. Anatomic brace for the cure of flat foot. G. E. Buell, Rochester, N. Y.
832851. Artificial leg. G. A. Erickson, Minneapolis.
832613. Ankle corset. Gustave Krieger, New York.
832680. Surgeon's operating table. Florus F. Lawrence, Columbus, Ohio.
833136. Surgical implement. Alfred Littauer, Brooklyn.
832618. Dropper. John McNally, Queensland, Australia.
832621. Sticking plaster. Franz L. Piro, Rodelheim, Germany.
833103. Inhaler. Wm. T. Wood, Nashville, Tenn.
833669. Spittoon or sanitary receptacle. J. P. R. de Britto, Rio de Janeiro.
833671. Surgical appliance. F. W. Brown, New York.